

JULY 1957


National
**SAFETY
NEWS**


A NATIONAL SAFETY COUNCIL PUBLICATION



**ANNUAL FIRE
PROTECTION
ISSUE**

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 **Ready for Fire — a photo feature**

 **Guarding Overhead Lifting Devices**

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SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

Vol. 76, No. 1

JULY 1957

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Flames of Inflation

MANY a day gets off to a depressing start with the breakfast-time broadcast and the morning paper carrying news of a disastrous fire. A home, a factory, or a public building has been destroyed — with loss of life and property, plus an incalculable total of intangible and uninsurable values.

We are, of course, appalled most by loss of life. But no one need apologize for stressing destruction of property. Such losses have far-reaching effects on the welfare of individuals. Whoever holds the deed to the property, everybody has a stake in it.

Inflation is causing much uneasiness but not much is being done about it beyond talk. Described in simple terms, inflation is an extreme example of supply and demand in operation. Many materials and job skills are in short supply and there are many bidders. Fire cuts down the supply and increases the demand.

Property destroyed must be replaced at higher cost — and sometimes the cost isn't warranted by business prospects. So the business folds up and jobs are destroyed with the plant.

Economists are worrying about the time when the U. S. A. will be a have-not nation, forced to buy many materials in the world markets, with its trading power cut by lack of once-abundant natural resources.

Science, we are sure, will continue to produce miracles for better living. Atomic and solar energy will be working for us by the time our fossil fuels are exhausted. But these power sources will come into use only when competing fuels become more expensive.

Industry's fire losses have been soaring — due both to more fires and to inflated values. And every building consumed adds that much more to the inflationary spiral.

Fire safety — protection plus prevention — is a goal of every well-managed company. Fire Prevention Week is still weeks away; but it's time to start working on a program — one that will include both plant and community.

Conducted on a nation-wide scale and backed by all the forces of safety and fire protection, such a program could make a worthwhile contribution to the fight against inflation.

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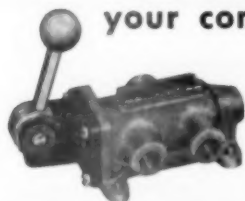
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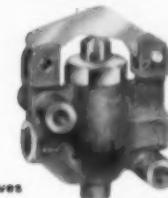
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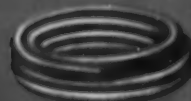
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A quick wiping with Sight Savers and glasses are bright again . . . no need for lengthy time-outs. And Sight Savers are *economical* . . . no bottles, liquids, or separate cleaners needed . . . one inexpensive tissue does the job.



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Many wise safety directors encourage employees to wear eye protection by providing the quickest, easiest way to keep glasses clean... Sight Savers.

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(Fiction)

THE DIARY OF A SAFETY ENGINEER

Their first attempt at accident investigation reminds our Safety Engineer's two new helpers that preventing accidents takes a lot more than engineering

FIRST LESSONS

By BILL ANDREWS

July 3, 1957

My two new assistants, fresh out of Tech, started to work for me Monday. After they had been processed by the personnel department, I had a session with them to orient them on our project organization. Then I took them on a tour of the layout to help them translate the lines on the blueprints into a physical reality. Then I left them to go over our files of bulletins, rules, and accident reports.

Tuesday I took them with me through the one completed unit of the Lovellburg project—McCarthy Products. I introduced them around, but mainly I made the tour of the plant what I hoped was an example of a rigorous housekeeping inspection.

When we were back in the office I asked for their findings. Naturally, as inexperienced hands, they had missed most of the housekeeping faults, and had, on the other hand, noted as examples of bad housekeeping some conditions which were in fact not faulty.

I showed them my own report, and I emphasized its differences from theirs, calling on them to sharpen their eyes and understanding.

"I'm not blaming you," I said. "We see with our minds as well

as our eyes, and there's no substitute for practice. I remember once going hunting with a Montana rancher in the hills. He had vision no better than 10-20, but he could see deer in the pines that I could hardly spot even when he pointed them out to me. The thing you've got to realize is that, until you get experience, you are half-blind, and you must work endlessly to sharpen your ability to see intelligently."

Today I had a staff meeting in the superintendent's office, so I turned the boys loose in my jeep to get the feel of the construction job that is beginning to shape a stretch of Illinois prairie into a model industrial community.

"Don't intervene," I said, "and don't get in the way. But watch various operations, and if you see anything that looks bad to you, take notes on it and we'll talk it over this afternoon."

* * *

I got back from the meeting about two, and my girl had a message from the boys that had come in 10 minutes earlier. It read, "Accident at Block 32. Ambulance called. We're investigating."

I took my own car and was on the scene in five minutes, just as the ambulance pulled away. A bulldozer was on its side at the

foot of the bank of a fill above Salt Creek. A cluster of workmen were on top of the bank talking, and my two boys were in the center of the group, pencils flying on notebook pages.

I called them out of the group and took them aside. "What have you got?" I asked.

Lee Burton replied, "It's still pretty confusing, boss. I can't unravel the conflicting stories. Some of the men say the dozer operator was drunk and skylarking. Others say that he was a good steady man, and that the bank gave way. One man claims the foreman ordered him to work on the slope, and that it was too steep, and he rolled. Give us a little more time, and we'll go back and try to get the real story."

Jim Dale added, "I don't think the injury is serious. He had contusions on the face, but he was conscious and walked. He complained his arm hurt."

"Who is foreman here?" I asked, and both boys looked blank. "What about tracks?" I asked, and again they looked blank.

I didn't waste time with a bawling out then. Down by the dozer was Johnny Blake, a good, unimaginative, solid foreman for the earth-moving contractor. I slid

—To page 132



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PERSONNEL & SAFETY DIRECTOR
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WEST PROTECTIVE CREAMS protect against hundreds of troublesome industrial irritants. They're antiseptic. Inhibit harmful bacteria with Hexachlorophene. And they protect for extended periods of time.

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MR. HENRY BACKUS, Personnel & Safety Director for the Midwest Abrasive Company, Owosso, Michigan.

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Warm-Weather Warning: It's Poison Ivy Time

THOUGH IVY POISONING is a year-round hazard, it is most common during summer, and can come from contact with any one of more than 60 varieties of plants found in the United States.

Most persons are immune to the biggest share of them, but nearly everyone who touches the three most commonly known plants—

poison ivy, poison oak, and poison sumac—is affected to some degree.

Such poisonous plants are the bane of outdoor workers. In one year more than 2,000 employees of the Connecticut State Highway Department contracted ivy poisoning, losing from two to five days of work. This despite a program of inoculations, eradication of roadside growths of the plants, and years of experience in detecting them.

Ivy poisoning is caused four ways:

1. Bodily contact with any part of the plant.
2. Exposure to smoke from the burning plant.
3. Contact with clothing or other objects that have been exposed to it.
4. Wading or swimming in water containing its oil.

Here's a brief description of the "Big Three":

Poison ivy, a low shrub or climbing, creeping vine, has leaves (a shiny, dark green in summer, a brilliant orange or scarlet in fall) that may be notched or smooth and are arranged in groups of three on short stalks.

It may be found in every state except California and Nevada in woods or in the open—along fence rows, paths and roadways, and climbing trees or posts.

Poison oak, a variety of poison ivy, is a term given two plants—one a shrub, the other a shrub that may become a vine. Leaves of the former resemble small oak leaves, occur in groups of three, and are somewhat hairy and deeply lobed. This type is usually found south of a line connecting southern New Jersey to Tennessee and extending as far west as Missouri.

Leaves of the second type, which are oval and rounded, also come in three's. Strictly a western plant, it's found in states bordering the Pacific Coast and grows in the same locations as poison ivy.

Poison sumac (also known as white sumac, poison ash, poison dogwood, poison elder, and thunderwood) is a shrub, but occasionally can be found as a tree 20-30 feet high.

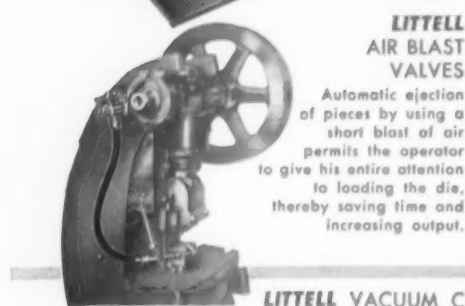
Its sharply pointed, smooth, oily leaves are arranged in pairs along a slender stem with a single leaf at the end. Poison sumac has smooth, cream-colored berries growing in loose clusters along the side of a branch or stem.

Many popular misconceptions exist concerning the three poisonous plants. Among them are these:—Blisters from poison ivy don't contain poison. They do. Breaking the blisters spreads the irritation.



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- Eating leaves of the plants affords protection. It doesn't. Death has resulted from this.
- Some persons are immune to ivy poisoning. No one is. Nor does immunity once insure future immunity.
- Others can catch poison ivy from your rash or blisters. They can't. It's not contagious.

Recommended precaution after coming in contact with the poison is to wash the affected area five or six times with plenty of laundry soap and tepid water. Don't use a brush or rough washcloth. Self-treatment can be risky, so see a physician.

Voice of the Reader

Let's have your views on current topics. You don't have to agree with us

Tool Cribs

WESTBURY, N. Y. I was very much interested in your May issue particularly in the article, "Make the Tool Crib a Safety Center," by William Raisglid.

Could you send tear sheets of this article? We'd like to use it in our safety program.

—B. SHERMAN, *Comptroller*
Stanat Manufacturing Co.

The Missing Diary

VANCOUVER, B. C. Please advise page number in May issue for the "Diary of a Safety Engineer," and why that page was not in the copy I received.

—C. R. RUSTEMEYER, *Canadian*
Forest Products, Ltd.

DALLAS, TEXAS. What happened to the "Diary of a Safety Engineer" in your May issue? That's far and away the best regular feature of your magazine. I surely hope you didn't let one reader's minor criticism of the January installment convince you it should be dropped. Let's have more!

—R. S. MINER, *Substation and*
Transmission Division Head,
Dallas Power & Light Co.

Because of an attack of flu combined with the load of parish duties during the Lenten season, The Rev. E. W. (Bill) Andrews failed to send in the monthly installment of the diary. This was the first time he has missed since the feature was started in November 1947.—Ed.

Permission Granted

ST. LOUIS, MO. May we have permission to reproduce the article, "Words That Gave Me Back

My World," in the June issue?

We have in mind to make a folder for distribution to our plant forces to encourage the use of safety glasses and goggles.

We have had three lost-time and 63 medical-treatment accidents due to eye injuries so far this year, and we feel that Harry Skoog's story will put safety glasses on more of our people.

—E. E. BENNETT, *Plant Safety*
Engineer, Southwestern Bell
Telephone Co.



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Circle Item No. 5—Reader Service Card

CONSULTATION CORNER

By George MacDonald, Industrial Department, NSC

Got a problem in accident prevention or occupational hygiene? Questions are answered by mail, a few of general interest being selected for publication here

Revised Data on Oxygen Piping

In the May issue this department ran an article under the heading, "Wrong Kind of Pipe for Oxygen."

The International Acetylene Association, New York, reviewed this article very carefully, made corrections, sent additional information, and supplied us with the NFPA No. 51 *Standards for the Installation and Operation of Gas Systems for Welding and Cutting* as a reference. With this help we are now able to rewrite this article with corrected information and with a clear understanding of how the problem might be solved.

A search of material in the National Safety Council Library revealed no data or recorded experience with reducing the fire hazards by diluting oxygen gas with 30-50 per cent of an inert gas.

The International Acetylene Association points out that in this country there are hundreds and perhaps even thousands of installations where oxygen has been distributed through steel pipe safely and without trouble for many years.

The use of steel pipe for oxygen distribution lines in industrial service is recognized in all national standards which cover this subject. It is recognized in NFPA Standard No. 51 in Section 19 on page 13.

The same stipulations are to be found in the American Standard Z49.1, *Safety in Electric and Gas Welding and Cutting Operations*.

Referring to the specific question that was directed to us concerning the piping of oxygen through existing steel pipe, the International Acetylene Association as well as the direct references that were given to us state that "this could be done provided

that the line is satisfactory for and tested for the pressures involved, that it was not assembled using material such as pipe thread compounds unsuitable for oxygen service, that the valves are checked to be sure they are suitable for oxygen service or replaced with others that are. Also, it is important that the line is thoroughly cleaned by washing with a hot solution of caustic soda or trisodium phosphate."

The Consultation Corner thanks the International Acetylene Association for its expert advice.

Line-Throwing Gun Solves Climbing Problem

Question. We have recently acquired a contract for clearing a tract of land of old buildings and industrial structures. It is necessary for us to be able to throw ropes, or use guide lines to pull heavier ropes, over or through structures. Sometimes we have the additional problem of trees and high brush in our way.

Our men are not experienced in climbing and we are wondering what safe practices we should follow in climbing these structures with rope or in throwing rope.

Answer. The Council's Data Sheet D-244, *Tree Trimming*, outlines safe practices in climbing, use of ropes, handling equipment, throwing ropes and other practices common to your operations. Many of these can be adopted and used directly.



Many companies are using a newer method of handling ropes which eliminates climbing. They

purchase or rent a line-throwing gun.

This gun looks like a shotgun but has a container attached to the front stock, filled with 400 to 600 ft. of coiled $\frac{1}{8}$ -in. nylon line. One end of the line is attached to a shooting rod inserted in the barrel. The gun is aimed and the line is shot through or over structures, then heavy ropes are attached and pulled through.

The one requirement is that, being a firearm, it must be treated with care and caution.

Before You Paint Those Windows . . .

Question. We are modernizing an old office building and rather than purchase new doors for the individual offices, we are going to paint the glass panels of the present doors with opaque paint. What are some of the problems that we may encounter in this operation?

Answer. Usually the original idea of glass panels was to allow natural light to be transmitted through to illuminate a dark area. This dark area could be in inter-office areas or long corridors.

First, make a survey of your light conditions and, where necessary, install additional light fixtures to compensate for the light lost in painting over the glass.

It is suggested that a small artistic design or a strip be masked before paint is applied. After the paint is dry, pull off the masking tape and this will leave visible signs that there is glass remaining as a door panel and that care should be taken that it will not be broken.

Doors used for fire exits should remain properly marked, but if painted solid they should still be marked as glass to be broken in an emergency.

If the glass panel is painted on both sides the word "Glass" should be painted on the inside as a warning to employees not to place objects against the panel. Door checks, stops, or bumper fixtures should be reinspected to see that they function properly.

A special opaque paint is required to paint glass. Some of these paints might have a lacquer base or other quick-drying ve-

They're using a mountain to span an inland sea

Wausau Story

AT GREAT SALT LAKE



You'll find a "bit of Wausau" out where 47 million cubic yards of earth are being moved to replace Southern Pacific Company's famed wooden railroad trestle.



Harry W. Morrison, President of Morrison-Knudsen, Inc., says: "No men are to be more respected than those engaged in the unending crusade for safety." His often-repeated belief that *safety must ALWAYS come first* is the foundation for the comprehensive program Employers Mutuals and Morrison-Knudsen Safety Men work on together. The Salt Lake Fill Project has established a record of more than 200,000 man-hours without a lost-time injury.

.....

Employers Mutuals, with offices across the country, writes all lines of fire and casualty insurance. We are one of the largest in the field of workmen's compensation. For further information see your nearest representative (consult your telephone directory) or write us in Wausau, Wisconsin.

WEST OF Ogden, Utah—25 miles as the gulls fly—the Morrison-Knudsen Company, Inc. is building a 13-mile fill for Southern Pacific.

This \$49 million job involves dredging 15 million cubic yards of muck from the lake bottom to form a trench . . . blasting and scooping out enough rock and gravel to level a mountain . . . moving this material by truck, track, conveyor belt and barge . . . and laying it down across the lake.

"Our work is done by men and machines," says Mr. Harry W. Morrison, Morrison-Knudsen President. "But without the men, the machines would never move. Their safety comes first on all M-K work."

That's why there's a "bit of Wausau" at Salt Lake. The considerate spirit of that Wisconsin community—an unwritten but vital part of every Employers Mutuals policy—is evident in Employers Mutuals' work. Employers Mutuals are specialists in insuring contracting risks. They help make the jobs come out safely and profitably. And they have the Wausau Way of working. As Mr. Morrison puts it . . . "Safety Men in construction need nerves of steel—but *tender hearts*."



Each man is x-rayed every 6 months as a safeguard against dust hazards. The x-rays are taken, read and interpreted under supervision of Employers Mutuals' radiologists and internists. This is just one of the many considerate safety and health services in the over-all Morrison-Knudsen program.



Out to sea go Employers Mutuals' Ivan Urban and Morrison-Knudsen's Carl Wufl, both Safety Engineers. Inspection tours of the entire project are a regular part of their joint "unending crusade for safety."

Employers Mutuals of Wausau



"Good people to do business with"



"double S-d"—Sol-Speedi-Dri—is now green-flecked to tell you it's in a class by itself. "double S-d" was the first mineral oil and grease absorbent. It's the largest selling, because it is modern industry's greatest convenience.

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☐ Literature
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Circle Item No. 7—Reader Service Card

hicles that may be flammable. If the job is done by spraying extra precautions should be taken.

Smoking should be prohibited in the area where the work is being done. Provide plenty of ventilation and have portable fire extinguishers handy.

If it should be necessary to remove the paint from the glass panels at a later date because of a style change or a desire to change the color there may be a hazard because of using paint remover. Use non-flammable paint removers and dispose of all paint strippings immediately to eliminate fire hazards.

Consideration might be given to the new wallpapers that are imitations of various kinds of wood finishes. This paper is applied to the glass panels with regular wall paper paste and a special adhesive and when dry the paper looks like a wood finish. This can be done very easily without the use of paints, solvents, etc.

Fast Pictures for Projection

Question. In our plant we are using a camera to take pictures of employees at a particular work operation, an assembly job, or to show a safe or unsafe method. We try to schedule these pictures for projection at our regular management meetings for discussion purposes.

Since we are located in a very small town we have to rely upon a local drugstore to send our films to the city for processing. Many times it takes weeks before we have a completed article. Because of this delay we often miss the punch or effect of the original picture story idea.

Can you suggest any ideas to reduce this lost time and still allow us to continue this program?

Answer. A new idea developed by the Poloroid Camera Company is now available. A special roll of direct film is placed into the camera. A picture is taken and the usual method of development takes place. After a few minutes the back of the camera is opened and the positive film (individual picture) is torn off the roll and inserted into a special prepared plastic slide frame.

This frame is then inserted into the projector and is used immediately. The regular size of the picture taken from the camera is large; however, it could be cut down to fit the frame of a 35mm slide.

If you are using a 35mm camera you could purchase direct positive black and white film and develop it yourself and place into frames for projection.

With the new simplified developing kits it would be very easy to take regular 35mm color pictures, develop and place into the frames for projection.

Another method is to use regular black and white film, and make contact prints on film that will make a positive. However, this is time consuming and may be difficult for the amateur.

If you were able to find out that several employees in your company were interested in photography as a hobby you may be in a position to develop a company camera club and give them an opportunity to develop these pictures for you. The company may be willing to provide space and build a darkroom for company use.

Sometimes a local school has a student camera club and they might be interested in developing your pictures on a small fee basis.

If you were unable to develop a camera club within your own organization perhaps you could find out that the children of several employees were interested in photography and that they could be gathered together to form a club using your company's darkroom and they could be assigned the project of developing these films for you as a payment for the use of your darkroom and equipment.

All of these ideas should reduce your present waiting time and may develop interesting hobbies plus a good public relations program for your company.

Rubber Glove Allergy

Question. I am a safety instructor working with rural electric co-operatives and have a problem concerning a man whose skin is allergic to rubber gloves. He can

—To page 159



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THE ACCIDENT BAROMETER



Prepared by the Statistics Division,
National Safety Council

THE DEATH TOTAL for March was approximately 7,100, or 4 per cent below March last year. There was a decrease in home accident fatalities, an increase in work and no change in motor-vehicle and public non-motor-vehicle.

The 3-month death total was 21,600, a reduction of 1 per cent from 1956. Decreases in motor-vehicle and home accident fatalities were nearly offset by increases in work and public non-motor-vehicle.

Motor-Vehicle Deaths

The March total of motor-vehicle deaths was 2,920—no change from March a year ago. However, compared to 1955, it was an increase of 12 per cent.

Deaths for the 3 months totalled 8,320, a decrease of 4 per cent from 8,630 in 1956. The 3-month death rate per 100,000,000 vehicle miles is not available at this time, but the 2-month rate was 5.4, a reduction of 13 per cent from the 1956 comparable rate of 6.2.

For the 3-month period, 29 states had fewer deaths than last year, 1 had the same number and 18 had increases. Reporting cities with populations of more than 10,000 showed an increase of 3 per cent for March but a decrease of 6 per cent for the first quarter of 1957.



	1957	1956	Change
March	7,100	7,400	-4%
Three Months	21,600	21,900	-1%

Regional changes from 1956 in the 3-month motor-vehicle death totals were:

North Atlantic	-6%
South Atlantic	-4%
North Central	-5%
South Central	-7%
Mountain	+5%
Pacific	0

Work Accidents

Deaths from work accidents totalled 1,200, or 100 more than occurred in March last year. The total for 3 months was 3,400, an increase of 3 per cent over 1956.

The March frequency rate for

plants in 18 sectional accident prevention contests conducted by the National Safety Council was 5.42, no change from 1956. The March rate for plants in community council contests was 5.16, a decrease of 11 per cent from last year. The 3-month rate in sectional contests was 5.22, a reduction of 19 per cent; in community council contests the rate was 5.26, a decrease of 7 per cent.

Public Deaths

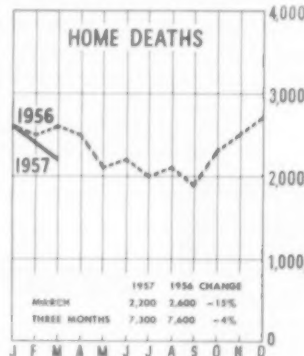
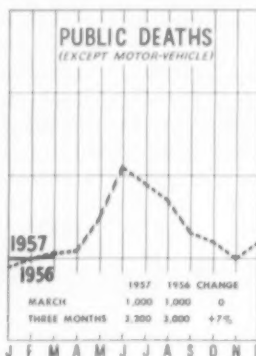
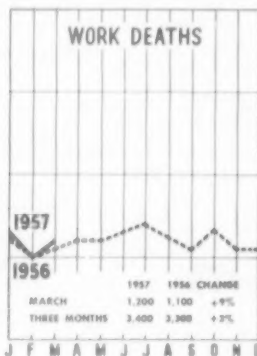
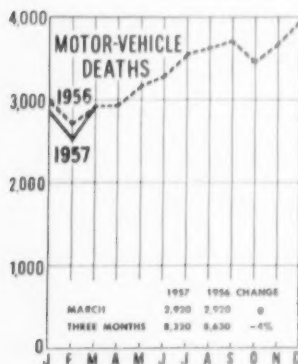
The death total from public non-motor-vehicle accidents in March was 1,000—about the same as in March last year.

Deaths during the 3 months totalled 3,200 or 7 per cent more than in 1956. There were increases in deaths from burns, falls, firearms and transportation accidents and a decrease in drownings. More deaths were reported for children under 15 years of age and persons 25 to 44 and 65 years and over; fewer deaths for young people 15 to 24 and persons 45 to 64 years old.

Home Deaths

March deaths from home accidents numbered approximately 2,200, or 400 fewer than last year.

The 3-month death total was 7,300, a reduction of 4 per cent from 1956. There were decreases in poisonings and falls, increases in mechanical suffocation and firearms accidents and no change in burns. Increases occurred in deaths of children under 5 and young people 15 to 24 years old. Other age groups showed decreases, with the largest change recorded for persons 25 to 44 years old.



Workmen in Bare Feet!

ridiculous yes, . . . but shoes without safety steel toes can be just as risky

Today you can select safety shoes for your workers ranging from the finest dress oxfords to heavy duty work boots . . . all having the maximum steel toe protection afforded by the new improved WINGUARD steel toes.



actual photograph of new improved WINGUARD toe

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A SMART DRESS SHOE**

*...but the
DIFFERENCE
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sole, brown Oil-Resistant
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HY-TEST

FAMOUS "ANCHOR FLANGE" SAFETY SHOES

WIRE FROM WASHINGTON

By Harry N. Rosenfield

Washington Counsel, National Safety Council

TO A LARGER EXTENT than has been so in recent months, congressional and executive emphasis on safety has been increasingly directed to the industrial field.

Industrial Safety. Atomic safety has been in the main safety spotlight in Washington. The Congressional Joint Committee on Atomic Energy reported favorably on S. 2051 and H.R. 7383 which would provide for indemnification against nuclear reactors accidents, up to \$500 million in claims over and above that provided by private insurance (such latter amount being determined by the AEC as a condition of the license for such reactor). The AEC is also under "the compelling duty" to "see that the reactors which are built are designed, constructed, and operated in the safest fashion," according to the Committee.

To this end, statutory status was given to the Committee on Reactor Safeguards, and the bill requires publication of its reactor hazard reports prior to hearings on construction permits and requires public hearings on applications for certain facility licenses.

The AEC warned Congress that disposal of radioactive wastes from nuclear power plants would create a world health problem in the absence of the safeguards to be set up by the International Atomic Energy Agency, which would be created by a treaty which the Administration wants the Senate to ratify. According to AEC, the health and safety of the United States depends on "an international agreement on standards of health and safety applicable to atomic energy."

The AEC reported on the results of a study on the theoretical possibilities and consequences of accidents in large nuclear plants; it stressed the importance of careful operating procedures, adequate design, and control features. In a speech on this study, an AEC member said:

The nuclear power field is the first industry where a careful and objective evaluation of public risk has been made before the business has achieved commercial status. . . . Safety measures to protect the public have first been imposed from outside the industries themselves. . . . For some activities characteristic of our civilization, such as the use of automobiles with the attendant approximate 40,000 yearly death toll, our extensive safety measures cannot be said even now to have brought the situation under control.

The Commissioner stated that "nuclear reactors have been operated since December 2, 1942, with a

safety record far better than that of even the safest industry."

AEC amended its regulations on standards for the protection of workers and the public against radiation to provide that licensees of nuclear facilities must promptly notify AEC of potentially serious accidents involving licensed material.

The United States Department of Labor amended its Child Labor Regulations (Hazardous Occupations Order No. 6) to extend coverage of the order to include sealed sources of radioactive substances and to restrict the permissible limits of exposure for 16-18 year old workers to 10 per cent of the limits permitted for adult workers by the National Committee on Radiation Protection, a group sponsored by the National Bureau Standards.

The Department of Labor acted on the basis of a record of facts which indicated, in part, that the effects on continued exposure to radioactivity are cumulative and that a person employed in an occupation subject to radioactive exposure will absorb radioactivity in an ever-increasing total amount throughout the entire period of such employment.

The U.S. Public Health Service set up a national advisory committee on community air pollution. The Biological Warfare Center discovered that atomic irradiation can be used to eliminate sewage waste from streams and water supply sources, without injury to people.

The Senate passed S. 1491, to amend the Transportation of Explosives Act (see "Wire," June 1957), and the House held hearings on the companion bill, H.R. 5629.

By a 5-4 decision, the Supreme Court of the United States ruled that the Federal Safety Appliances Acts apply to a 4-wheel gasoline motor-powered track car fastened to a 4-wheel push truck carrying tools and equipment used in railroad maintenance-of-way work. This reversed a 60-year view by the Interstate Commerce Commission.

The House Committee on Education and Labor scheduled hearings on H.R. 1240 and H.R. 3394, H.R. 3639, and H.R. 4111, on various aspects of mine safety in metallic and nonmetallic mines.

Highways. S. 1463, authorizing awards for acts of heroism involving motor vehicles (see "Wire," June 1957), was passed by the Senate, and, in amended form, by the House of Representatives.

S. 963, to control advertising along the interstate
—To page 136

Program Stalled?

...Try "PRO-PAR"

It's an abbreviation of PROFitable PARticipation

By ROBERT S. BOAZ

... And here's how it can help you

IS IT TIME for a change in accident prevention activities?

Many industries report real, substantial reductions in accident frequency over the past decade, particularly the larger companies. That's good, but . . .

The lower the frequency the more difficult it becomes to show continued improvement. Perhaps the shotgun approach, used by many who feel that "something should be done," should be replaced with effort aimed at a specific target.

It appears we have three basic choices of methods for implementing the lowest possible accident frequency:

1. Create foolproof conditions on each job.
2. Set ironclad rules to assure safe practices; then enforce the rules.
3. Get the individual who is exposed to the hazards to decide in his own mind that he will not have an accident.

This third method calls for an application of group management principles. Whether we like it or not, group management is here. It is still in its infancy, as the automobile was in the 1900's, but after a few years of growing pains it will progress rapidly. PRO-PAR contributes to this progress and the reduction of accidents through group management.

Labor and management representatives have sincerely battled the "Unsafe Conditions" situation for nearly a half century and with

many good results. However, we have learned we cannot make each job foolproof even though the hazards on many jobs have been reduced. Apparently, then, this method has helped but is not a complete answer to accident-free operations.

Rules (and laws) have been established since the beginning of time by well-meaning people for the sake of others but most of us find opportunities to break them when it serves our purpose! For example, how about you? Did you ever violate a traffic rule? Why did you do it?



ROBERT S. BOAZ is Director, Personnel Development Service, Renton, Wash. He is a member of the American Association of Training Directors and has directed training programs for many large corporations.

Is it possible you and I violate rules because we were not involved in establishing them . . . because we do not understand them? For instance, I might reason the speed laws for roads in my state were not set for me. After all, they were established before our highways were widened . . . before our cars were modernized. They do not apply today to me for I have never had an accident.

Such false reasoning is not too divorced from the subconscious analysis about a safety rule on the job. The best compliance to be hoped for, when the worker has such an attitude, is adherence to the rules when the boss (policeman) is around to watch the worker. Actually, an extra hazard may be created when the boss is around enforcing rules. The worker has one eye on the boss and one on the job.

It would appear then that we cannot expect accident-free days from foolproof conditions or rules alone.

Accidents are infrequent with supervisors, safety directors and safety committeemen, so perhaps the focal point of a successful accident prevention program should be on the individual who is exposed to the hazards. Perhaps we can create conditions which will help him decide in his own mind that he will not have an accident.

Such a plan calls for communications which will result in a change of behavior. Obviously, if a man is aware of a hazardous condition and follows a safe prac-

tice, there is little likelihood of an accident or injury. If, on the other hand, he is not aware of the danger, does not see the importance of, nor know how to follow a safe practice, he is an accident waiting to happen.

Communications call for group safety meetings or boss-subordinate discussions held every day, but I wonder with what effectiveness?

What Does a Meeting Do?

Actually, what are the purposes of a good discussion type safety meeting? Should it:

1. Acquaint people closest to a hazardous job with information unknown but important to them?
2. Tap the brainpower of people closest to the hazardous conditions in an effort to reach better solutions on how to avoid accidents?
3. Cause a change in behavior by getting those people concerned with a situation to recognize its inherent dangers and the correct procedures to follow for avoiding injury?

Perhaps there are additional purposes but for now let's consider these three. Why aren't we more successful in conveying the information necessary to attain any of these basic goals for a safety meeting? Why are so many safety meetings and discussions ineffective?

Is it because of incompetent discussion leaders or because the people attending the meeting don't know how to participate in a discussion themselves? Perhaps both leader and participants share the responsibility.

Participants need to understand the principles of PRO-PAR for it teaches people who attend discussion type meetings to profitably participate, so they can reach more effective conclusions in less time.

Many times, a change in the participant's behavior is not realized because the leader concluded the meeting without clarifying *who* should do *what* . . . but does that excuse a participant from not requesting clarification?

Good As We Know How

A SALESMAN was trying to sell an old farmer a book on improved farming methods. The farmer said, "I don't need no book on improved farming. I'm not farming now half as good as I know how!"

It's funny, but humans were given an awful lot of ability—"not to use as well as they know how." For example:

We don't raise the kids as well as we know how.

We don't treat the spouse as well as we know how.

We don't watch our weight as well as we know how.

We don't see a doctor as often as we know we should.

We don't go to church as often as we know we should.

We don't keep up the house as well as we know how.

We don't quit drinking as soon as we know we should.

We don't mix with the neighbors as often as we know we should.

We don't participate in civic affairs the way we know we should.

The same treatment is given safety. We don't need anyone to tell us to be safe. We're not being as safe now, as we know how!

Yet, with all this second-rate activity on our part, we complain that people don't appreciate us as well as they know how—or that we don't have nearly as much money to spend as we know how.

What's the use of knowing how to do things, we don't do, so well?

—ROBERT D. GIDEL

And how many times do we find a safety meeting where neither the leader nor the participant really listened to what the other fellow said? It is easy for a fellow to justify, in his mind, the following of his old practices when he doesn't listen to their shortcomings nor ways to improve his safety.

What They Listen To

The comments by participants in many safety meetings reveal they listen to:

1. Spot where an idea won't work.
2. Find where their own idea could be proved best.
3. Prove the speaker is wrong.
4. Justify the continuance of personal habits and practices.

It seems to me that meeting failures of the nature described can be traced to both the leader and the participant and certainly both have a major responsibility for the success of an effective safety meeting. In spite of this recognized situation all of the books and training efforts to improve meetings appear to be directed toward the improvement of the leader.

PRO-PAR is a turnabout. It is concerned with helping the group member of a discussion type meeting to PROFITABLY PARTICIPATE in the conference regardless of the effectiveness of the leader. PRO-PAR demands clarification of group goals for participants and it identifies ways to gain PROFITABLE PARTICIPATION in their attainment.

People attending PRO-PAR seminars have concluded that participants in group safety meetings cannot profitably discuss a situation until they learn to *question* judiciously, *listen* constructively and *interpret* clearly.

We do not question judiciously when we embarrass the listener or put someone on the spot. PRO-PAR teaches the questioner to stimulate constructive thinking within the listener about possible improvements. Questions can help the participant discover the good parts of the other fellow's idea and many times will help both the questioner and the listener reach a change in viewpoints which is the basis for changing behavior.

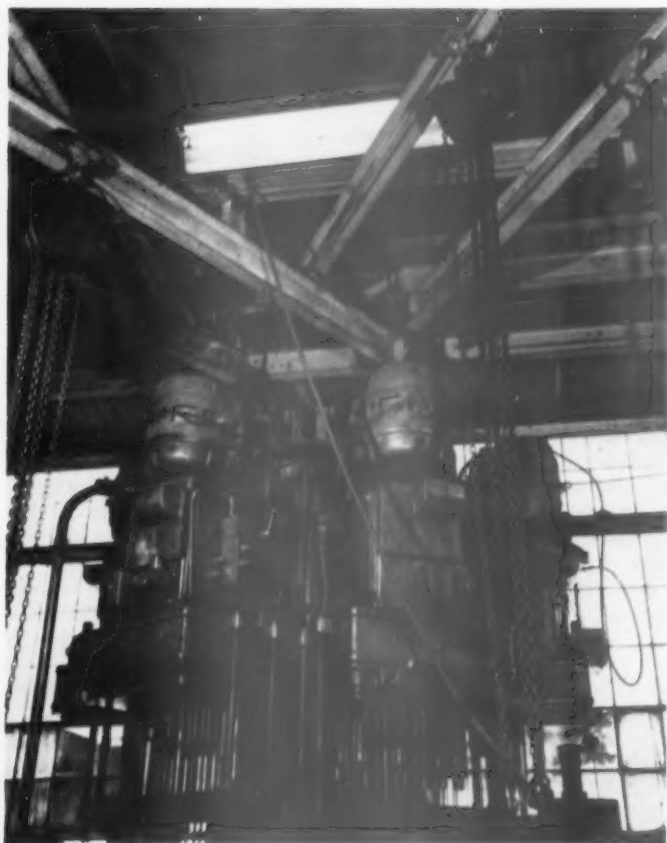
We do not listen effectively when participating in a discussion if we try to spot where an idea

—To page 148

GUARDING OVERHEAD

How to take advantage of the back-saving and lifting capacity of mechanical hoists without adding new hazards

By A. J. RUZICH



Hoisting equipment installed to full advantage, both safety-wise and operationally. Note:

- 1. Each motor is secured with steel cable to frame of machine to guard against motors working loose because of vibration.*
- 2. Use of steel cable from trolley to chain fall.*

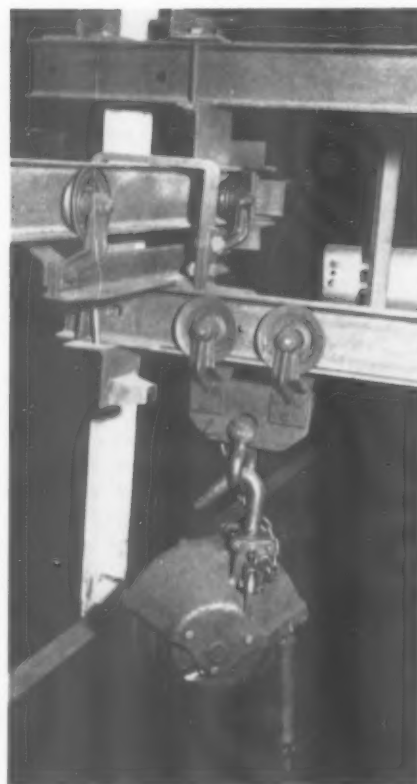
Simple but important points:

- 1. Bridging trolley rail in case of trolley failure.*
- 2. Use of rubber bumper for trolley stop to reduce shock and wear on component parts.*
- 3. Note clevis and pin set-up. Pin rests on finished surface through trolley body.*
- 4. Chain fastened to trolley body and balancer.*

PRIMITIVE men used strands of vine stems twisted together to pull loads up slopes. Then fiber rope was made, followed by wire rope. Later, the pulley was invented, followed by the windlass, pulley blocks, gears, brakes, and finally the electric motor. Today there is equipment capable of lifting hundreds of tons.

However, this progress has cre-

A. J. RUZICH is Safety Supervisor, Chrysler Corp., Parts Division, Center Line, Mich.



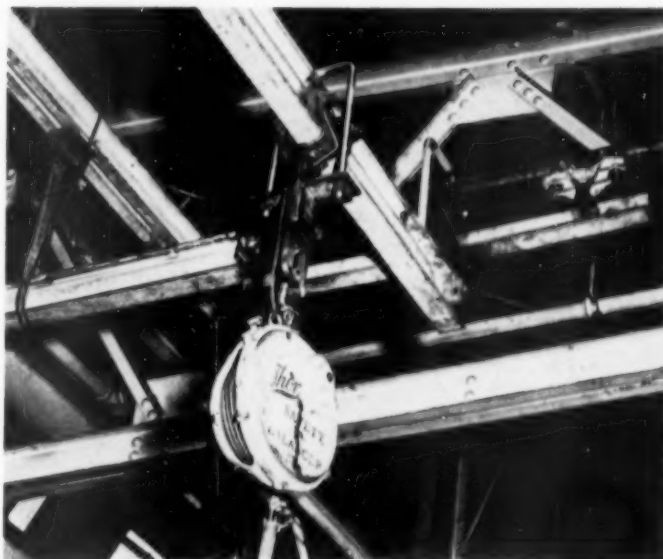
LIFTING DEVICES

ated new hazards and, therefore, guards and safety devices have had to be installed to protect the men who operate or work near hoisting apparatus.

The Engineering Committee, which is a part of the Automotive and Machine Shop Section of the National Safety Council, collects, tabulates, develops data, and recommends, in regard to engineering advances with respect to safety. The guarding of overhead lifting devices is such an analysis.

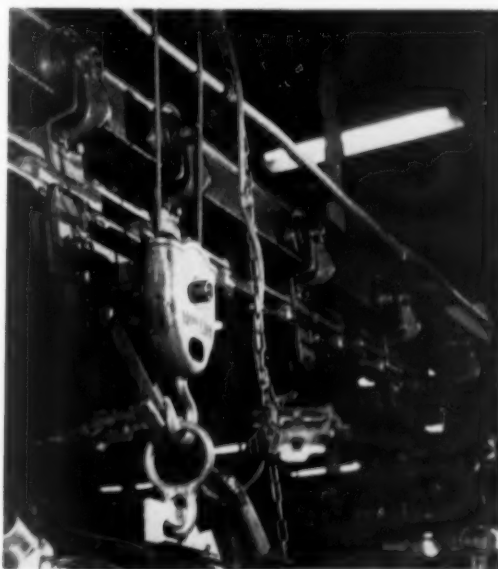
The purpose of this study is to analyze the methods that are being used. This analysis includes the application of physical items such as bushings, pins, cables, chains, stops, limit switches, bumpers, rail clamps, programs dealing with preventative maintenance and inspections.

This analysis is in its early stages and, therefore, we will not attempt to give a comprehensive report on such points of interest as stresses on metals or reasons



At two locations there is bridging of rail from which trolley and lifting device are suspended, plus protection of safety steel cable from hanger frame to solid forged eye bolt. Safety cable provides added protection against failure of hanger from which top trolley rail is hung.

Safety cable hookup between forged eye bolt attached to motor and to hangers fastened to concrete ceiling. Vibration is a cause of possible failure.



An extra safeguard. Rail keeps hoist cable and control cable from becoming entangled with conveyor.

Lifting Devices - Contd.

with respect to design details. Nevertheless, it is essential to bring the subject forward for recognition purposes and to establish the fact that overhead lifting equipment requires guarding.

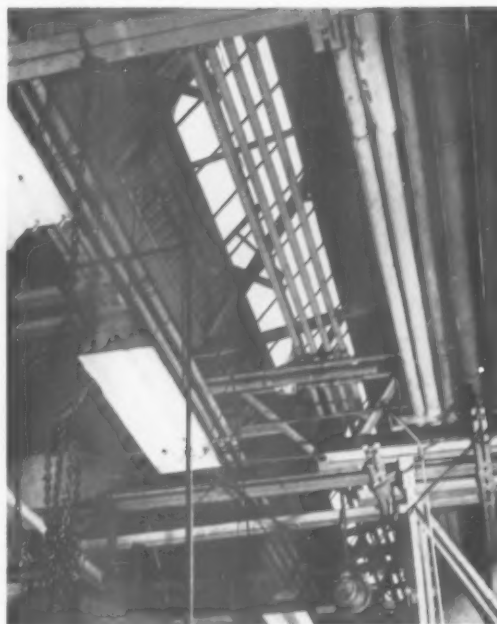
In the following pictures we have applications of guarding devices on lifting equipment. The safeguarding is not necessarily complete, however. The photos were taken at random for purposes of analysis.

These photographs are by no means all of the known methods of guarding overhead lifting

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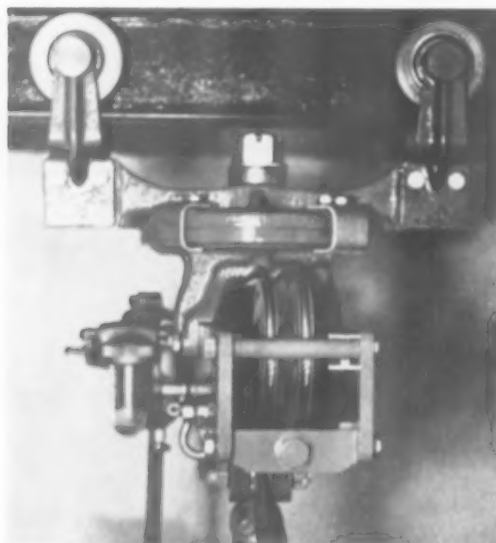
1. Double trolley—one for hanger of balancer and the other for added safety. Steel cable is used on both hanger trolley and safety trolley.
2. Trolley body designed to provide a bumper so that trolley wheels will not hit together or strike stop at end of rail. Side (horizontal) rollers are a guide and aid stability.
3. Closed forged eyebolt (not visible) is undercut so shoulder is square against surface of balancer. This eliminates tendency of bending and failure of eye bolt.



Making the best of a temporary set-up:

1. At left is chain fall attached to bottom of truss with chain.
2. In background a steel cable is hung between members of truss work. A balancing device is hanging from the middle.

This set-up is OK for temporary use but not suitable for continued operation. A permanent rail-and-hoist system is the answer.



A unit that pivots from a trolley. Note formed clips attached to circular flange of trolley body and projecting under circular flange of rotating unit. This gives protection against failure of center bolt or loosening of lock nut due to omission of cotter pin.



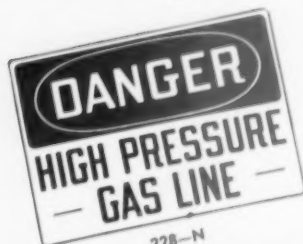
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FIRE PROTECTION SECTION

Fire Hazards!



901-9



228-N



970-95



232-5



257-8



1422



STONEHOUSE SIGNS

For Accident Prevention

The fire siren! It tells of danger, destruction, loss. But before it ever sounded, there was a cause. Carelessness usually sparked the first small tongue of flame.

Jobs, property, even life, often pay the heavy penalty to fire. Its toll runs into staggering loss of investment and human values yearly.

Day and night these signs stand guard against the chances of fire. They warn workers of hazards and how to overcome them — help save property, jobs, life, at modest cost.

Our complete Catalog—64 pages, in full color—free on request.

Stonehouse

SIGNS, inc. • Stonehouse Bldg., 9th at Larimer • Denver 4, Colo.

MANUFACTURERS

"Signs Since 1863"



ACCIDENT PREVENTION • steel SIGNS IN STANDARD COLORS AND DESIGNS

Circle Item No. 11—Reader Service Card



Minutes Ago This Jet Was Ablaze

This Jet Fighter skidded over half a mile and burst into flame at Worcester airport. In minutes Rockwood Double-Strength FOAM was blanketing the blaze. A dangerous fire was soon under control — because the airport and Worcester Fire Departments were prepared.

As you know, the danger of highly flammable liquid is not confined to aircraft. Every day tank trucks carrying volatile fuels move in and out of your city. Rockwood Double-Strength FOAM can help protect your city from this potential danger.

Rockwood Double-Strength FOAM

applied with a Rockwood FW Eductor fights flammable liquid and other fires of the same type fast and sure. Three parts mixed with 97 parts water forms a solid FOAM blanket that quickly reseals itself. The Rockwood Eductor with the new FW metering check valve and the Type SG60 nozzle applying the FOAM make short work of fire.

Be prepared. Put this fire fighter to work. Specify Rockwood FW Eductor when you order a truck. Write Rockwood Sprinkler Company, 2042 Harlow Street, Worcester 5, Mass.

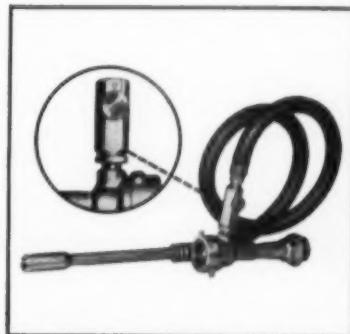


ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Distributors in all principal cities

Circle Item No. 12—Reader Service Card



The Variable FW Metering Check Valve on the Rockwood Eductor is highly versatile (standard equipment). Both are incorporated in a single unit. Material is metered into the hose line in any proportion from 1% through 6%.

ready for FIRE

Regular drills with all types of equipment are part of the program. Here one employee extinguishes a liquid fire with a dry chemical spray while another operates controls at tank.

Firemen are in action—even when they're not fighting a blaze. Between calls they keep busy maintaining valves, water systems, extinguishers and other equipment ready for use and drilling to improve their performance. Let's look in on the men who guard the plant of National Cash Register Company.



Taking a sample of water from automatic sprinkler line to check the anti-freeze. Frozen lines may put system out of operation.

ORGANIZATION for fire protection is a finely balanced mixture of human and mechanical elements, each planned to compensate for possible failure of the other should an emergency arise.

Fighting fire is the most spectacular function of the plant firemen but it is only one of their many duties. Even more important is their contribution to prevention. Care and thoroughness are essential in such a job.

Constant and accurate maintenance of valves, water systems, pipe lines, extinguishers and other equipment keeps them always on their toes.

Even while walking through the plant, the fireman is on the alert for poor housekeeping, infraction of fire rules or equipment that isn't functioning.

He can never allow himself to say, "I think that valve or extinguisher is in good working condition." He must know that it is



Firemen with hand extinguisher trucks equipped for different types of fires. A fireman with one of these trucks is on hand at every welding job.



Booster pump receives weekly inspection. Pump kicks in automatically when line pressure drops below 88 lbs. and restores it to 125 lbs.



ready to perform its function in any emergency that may arise.

That's the attitude of the well-trained, well-equipped fire-fighting force that stands guard over life and property at the vast plant of National Cash Register Company at Dayton, Ohio. Here in the vital work of plant protection manpower has the support of an intricate system of ingenious equipment for detecting and extinguishing fires.

"Brain" of NCR's alarm and communications system is in the

basement of Building No. 10. This central station can be compared to the nervous system of an organism. Here thousands of wires and alarm devices throughout the factory have their headquarters.

Like the nerves of the body, these alarms and communication wires are constantly on the alert for the stimulus that will cause them to send their message to the brain — the central station.

Suppose a fire somewhere in the factory begins to burn unnoticed by anyone. That's where the



▲ Sprinkler system surrounding huge auxiliary transformer is tested. Should transformer heat to critical temperature, sprinklers cut in automatically.



◀ Fusible link which melts at 165 F. can drop this door to seal off areas in case of fire. Fire doors receive regular tests.



◀ Instruction is an important part of plant protection. John Moore, job foreman of the Fire Brigade, instructs men on how to locate fire when alarm is sounded.



▲ Checking hoses in basement of central station building. Hoses must not be cracked or frayed and nozzles must be free of clogging.

ready for

FIRE

continued

nerve system takes over. A sprinkler head lets go when the critical temperature is reached. Water begins to surge through the sprinkler system to put out the fire.

Meanwhile, another nerve in the transmitter box on the main floor of the building is actuated.

A valve in the main water supply pipe fluctuates with the flow of water. When water runs unchecked for 40 seconds, the transmitter box sends an impulse to the central station and the alarm is sounded immediately.

The first time the alarm rings it notifies the central station operator of an emergency. Then the automatic printing recorder records the alarm and such information as water flow and the sprinkler system that began the chain of events.

NCR is divided into five distinct zones. Each zone is comprised of a certain cross section of the plant layout. When an alarm rings, the system zone number is immediately printed by the automatic printing recorder. The operator can then quickly find the exact location of that system by consulting a zone chart set in the wall in front of him. With the printing recorder no decoding is necessary, thus saving vital time.

In less than one minute from the time the first alarm comes in, firemen are on their way to the exact location of the disturbance.

The central station, however, is more than a check point for water flow or fire alarms. It is also the heart of the NCR auto-call system and the switchboard for weekend, nighttime and holiday telephone calls.

Another highly important feature of the central station is the



▲ There are 78 post indicator valves (PIV) at NCR. Each controls water to an entire section. PIV at left controls water supply to sprinklers and at right to fire hose. Tests are made weekly.



▲ Alarm test valve is tested once a month. The valve, located at highest point of section, releases any air that may have been trapped in pipes.

▼ Careful maintenance keeps all parts of system ready for emergency. If cover is removed from transmitter box an alarm sounds automatically at central station.



◀ At Central Station, nerve center of NCR's fire protection system, operator makes notation of call which has just come in. Above switchboard is directory from which he can determine location of fire when alarm comes in.



◀ NCR Fireman Chat Griffiths discusses function of automatic sprinkler head with John Moore, job foreman of General Service Department fire fighters.

main circuit breaker. Should electric power from the City of Dayton fail, the circuit breaker is activated by the operator and the electrical power load is transferred instantly to the company's own power generating system.

The central station also has a manual plug-in switchboard which the operator uses to activate the alarm system and the automatic recorder if a fire is called in rather than sent through the alarm system. With both the call-in manual alarm and the automatic alarm, the operator can keep the alarm going as long as necessary by use of a manual switch. Ordinarily, in the automatic alarms, the alarm will ring only five times.

—To page 36



▲ After receiving alarm at central station, plant guard sets up alarm on the board.



◀ It's easy to remember the plant fire department number—111. An operator in the fire area quickly calls in the alarm. Training means cool heads in an emergency.



When alarm sounds, one fireman grabs soda-acid extinguisher from rack.



Another takes a CO-2 extinguisher. One of them will be suitable for type of fire.



HOW THE RUBBER INDUSTRY

EARLY this year an East Coast rubber plant was razed by flames with a loss of more than a million dollars.

Even though the fire experience of the industry is not out of line with other types of manufacturing, catastrophic fires like this are not uncommon in the rubber industry.

To discover the latest methods used by the nation's top rubber companies to protect their plants from fire, the National Safety

Council's Rubber Section conducted a comprehensive survey of its member companies.

The fire protection methods and organization revealed by the survey have wide application not only for rubber plants but also for other industrial operations working with combustible materials.

Safety directors participating in the survey were asked to complete a six-page questionnaire that asked some 80 specific questions.

The questions covered all phases of fire protection, including fire-fighting organization, fire experience, extinguishers used, in-

THE PICTURE

Firemen pour water into flaming wreckage of Pequanon Rubber plant in Butler, N. J. The fire, which swept the multi-million dollar plant on the morning of February 26th, leveled all but two of 17 buildings.



**EXCLUSIVE
REPORT**

A NATIONAL SAFETY COUNCIL MEMBER SURVEY

Fire protection methods that have proved effective in the rubber industry have wide application in other industrial operations.

GUARDS AGAINST FIRE!

spection and testing schedules, and special precautions taken in various hazardous operations.

Some of the facts brought out by the survey were:

- Static electricity is the big fire villain in tire making.
- In four out of five plants, the same man directs safety, fire and plant protection.
- More than half the plants responding have had fires in ducts and dust collectors.
- Carbon dioxide and dry chemi-


cal are by far the most popular types of extinguishers in rubber plants because of stock damage problems.

- Most plants have weekly or monthly schedules for inspecting and testing fire-fighting equipment.
- Most plants use safety cans for all flammable solvents and use nonsparking tools in hazardous areas.

The survey, which included almost half of the Council's Rub-

ber Section members, covered plants ranging in size from those with fewer than 100 employees to one with 10,000 workers. Most of the plants had from 100 to 1,000 employees.

All of the principal types of rubber products are made by these companies—tires and tubes, footwear, belts, hose, molded products, extruded products, foam rubber, dipped goods, reclaimed rubber, hard rubber products, synthetic rubber and chemicals.



Although a few firms reported that they had no fires during the year surveyed, others reported as many as 50. However, it is important to keep in mind that some companies do not report a fire occurrence unless it causes a certain amount of damage, while other firms list all alarms no matter how slight the blaze.

Fires involving static electricity and those in ducts and dust collecting systems were most common in the rubber industry. In the larger tire making firms, static was the greatest problem.

Fifty-two per cent of the reports indicated that fires had occurred in ducts and dust collectors. Most companies favor the use of automatic fire protection for such systems whenever possible.

Cutting and welding operations were an important cause of fire. This was especially true in the medium-size and smaller plants

where permits for such operations were not usually required.

Overheated materials also were mentioned as an important source of fire. Other causes were overheated motors, various electrical problems and spontaneous ignition. Smoking was mentioned as a cause in only two cases.

The operations most often involved in fires were rubber cementing and spreading, the use of tire building machines and ovens and dryers.

Who Fights the Fires?

The survey revealed that in four out of five plants the same man was responsible for fire, safety and plant protection. Only the largest plants combine fire and plant protection, while maintaining a separate department of safety.

The large companies all employ some type of paid fire department. They also make use of either a plant-wide or departmental brigade. Many of the smaller companies indicate no organization of any kind, with a complete dependence on outside protection. Between these two extremes, there is about an even split be-

tween plant-wide and departmental brigades.

The frequency of fire drills varies from once a week to once a year, with a monthly drill the most popular. To stimulate interest some plants have an annual field day with competitions between various brigades.

One company, having tried both departmental and plant-wide fire brigades, decided that the use of only maintenance personnel provides a more efficient system. The reasons advanced: maintenance personnel are (1) familiar with the entire plant, (2) they know the electrical controls, and (3) at least in the case of this plant, they are centrally located.

Let's Have a Party!

The safety director of one of the largest plants surveyed suggests that the local fire company be invited in to become familiar with the plant's hazards. His company gives them an inspection tour, plenty of detailed information and a lunch! He also suggests that a "fire demonstration" be held periodically in more serious fire control areas, occasionally inviting the families of employees.

INSPECTING AND TESTING SCHEDULE

EQUIPMENT TYPE	DAILY	WEEKLY	MONTHLY	3-6 MONTHS
SPRINKLER CONTROL VALVES	2 %	61 %	30 %	4 %
FIRE EXTINGUISHERS	7 %	48 %	25 %	7 %
FIRE DOORS	11 %	52 %	27 %	2 %
FIRE PUMPS	7 %	48 %	11 %	4 %
GRAVITY TANKS	4 %	25 %	30 %	2 %
HOSE HOUSE	2 %	46 %	30 %	4 %
PERCENTAGES DO NOT TOTAL 100%. A FEW PLANTS INSPECT AT INTERVALS OTHER THAN THOSE LISTED. SOME PLANTS DO NOT HAVE EQUIPMENT.				

FIRE EXTINGUISHERS IN RUBBER PLANTS

PREFERRED BY *	EXTINGUISHER TYPE	USED BY
57 %	CARBON DIOXIDE	100 %
52 %	DRY CHEMICAL	84 %
9 %	VAPORIZING LIQUID	57 %
7 %	SODA ACID	84 %
	FOAM	77 %
	PUMP TANKS	36 %
	WATER PAILS	23 %
* PERCENTAGES DO NOT TOTAL 100% BECAUSE SOME COMPANIES STATED A PREFERENCE FOR MORE THAN ONE TYPE OF EXTINGUISHER.		

The housewife, he has discovered, will be surprised to find out what can be done with a box of baking soda.

Another company stages an annual fire protection equipment demonstration for all supervisory employees. This company also invites local fire department personnel to visit and inspect the plant.

What Kinds of Extinguishers?

Carbon dioxide and dry chemical extinguishers are preferred by most rubber plants to reduce stock damage. Some companies showed a preference for vaporizing liquid or soda acid. But only a few plants put all their fire-fighting eggs in one basket—the majority of them use a variety of extinguisher types. In addition to those mentioned, they use foam, pump tanks, water pails and high-pressure fog. One company uses fire buckets filled with soapstone because it does not damage stock.

The safety director of a medium-size plant notes that many small fires are prevented from developing into large conflagrations because every employee in the plant has been trained to

know how and when to use the fire extinguisher nearest his operation.

Most common inspection and testing interval for fire fighting equipment is *weekly*. Some companies inspect equipment as often as once a shift, while a few inspect extinguishers only once a year. The weekly interval was most popular for all equipment except gravity tanks. More plants inspected these monthly than weekly.

One safety director reports

that he has one man who spends all his time keeping extinguishers charged, and alarm and sprinkler systems tested. In this company the plant protection department inspects outside and inside sprinkler valves and makes a written report weekly. Another plant reports that sprinkler control valves are inspected each shift. A few companies depend on insurance carriers for periodic inspections.

Most of the larger plants use standard motorized fire apparatus. Motorized equipment also is used

HOW RUBBER PLANTS PREVENT FIRES

- ▶ Control static electricity by using grounds, static neutralizers and controlled humidity.
- ▶ Use automatic sprinklers in ducts, dust collectors, ovens and dryers.
- ▶ Set-up departmental or plant-wide fire brigades.
- ▶ Require permits for welding and cutting work.
- ▶ Provide doors to ducts and dust collectors for cleaning and fire fighting.
- ▶ Conduct periodic fire drills.
- ▶ Inspect all fire fighting equipment at definite periodic intervals.
- ▶ Use fireproof rooms to store solvents.

TRUCKS AND PERSONNEL of Akron Fire Department arrive at B. F. Goodrich plant as part of preparation for Fire Prevention Week. Plant Protection Chief P. L. Ferguson conducted the tours through flammable areas.



FIRE DEPARTMENT officers discuss fire extinguishers with Plant Protection Chief Ferguson (left). The invitation for area fire department personnel to visit the plants included lunch after tours of hazardous locations.



by one plant in the 1,000 to 2,500 employee class and by one in the 100 to 500 class.

One company uses small power-driven trucks to get the equipment to the blaze. But most plants use hand carts loaded with extinguishers, fire hose and other equipment.

Sixty-eight per cent of the plants are equipped throughout with one and one-half inch hose connections.

Safety Cans and Nonsparking Tools

Eighty-four per cent of those surveyed said that they use safety cans for all flammable solvents.

About two out of three plants use nonsparking tools in hazardous areas.

Less than 10 per cent of the companies using elevators to transport solvents permit passengers to ride at the same time.

The companies in the study were unanimous in their opinion

that a good grounding system is the best way to prevent fires from static electricity. Many static control devices were mentioned, including neutralizing brushes, controlled humidity and static dispersion bars.

Several of the plants reported that workers wear grounded garters or bracelets to ground static. Others use conductive floors or have work tables grounded. A few suggested that the use of solvents with a higher flash point would minimize the fire and explosion hazard.

Welding and Cutting

Two out of three companies require permits for welding or cutting. Most of those not requiring permits were among the smaller plants. It is significant that medium-size and smaller plants reported the greater number of fires from welding and cutting.

In all plants the members of

the guard force are required to be able-bodied. In most cases the basis for assignment is physical examination. Also used in a few cases was some type of aptitude or mental comprehension examination. Only a few of the smaller companies indicated that they use seniority and the preference of older employees as a basis for assignment of guards.

Approximately 50 per cent of the companies require some type of training prior to assignment as a member of the plant protection force. A few companies employ an outside agency to perform the plant protection duties.

THE MATERIAL in this article is based on a Fire Prevention and Protection Questionnaire completed by members of the National Safety Council's Rubber Section. Members of the Section's Fire Safety Committee, who prepared and processed the questionnaire, are A. R. Pomeroy, Ohio Rubber Co. (chairman); G. H. Burkhart, General Tire and Rubber Co.; Nick Hunter, Dunlap Tire and Rubber Corp., and J. J. Raytkewich, U. S. Rubber Co.



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PROTECTION**
against
**FIRE
THEFT
SABOTAGE**

CHICAGO Watchclock System

"The first . . . and still the first."

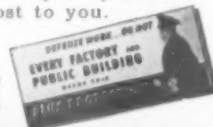
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It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE

new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!

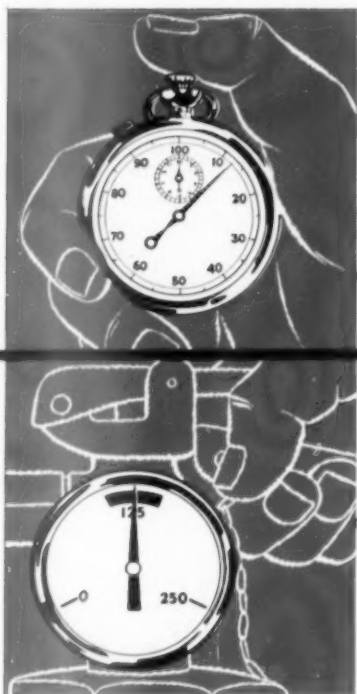


CHICAGO WATCHCLOCK

DIV. GREAT LAKES INDUSTRIES, INC.

1524 S. WABASH AVE., CHICAGO 5, ILL.

OFFICES IN PRINCIPAL CITIES



Karbaloy made it faster!

NOW...

Pressure makes it easier!

FYR-FYTER'S NEW... PRESSURIZED INSTANT with KARBALOY

kills both class "A" and class "B" fires!

Now you can have Karbaloy in a new, pressurized Instant Extinguisher! Press-lever control makes operation easier... conserves charge. Just press lever to start stream, release lever to stop! Instantly, amazing Karbaloy responds in a 40-ft. stream, killing roaring fires in one-third the time required by ordinary chemicals including water.

Non-freeze, non-toxic Karbaloy puts out more fire faster with less liquid, and also stops flashbacks in wood and rubber fires. Karbaloy fireproofs as it extinguishes! It is also highly effective on Class B incipient fires in gasoline, grease, oil and paint.

Instants are standard equipment on patrol cars covering the nation's major thruways, and on the truck-tractors of the major motor carriers... they are also the predominant extinguisher in underground mines, warehouses, lumber yards, piers, docks, ships and grain elevators.

No annual recharging is required! Any source with 125 lb. air pressure can be used for pressurizing. Instants are virtually the most effective Class A extinguisher of their type! Write today for complete information.

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Underwriters' Laboratories Approved
U.L. Rating 2-A, 1-B

CARDOX'

Experience grew from the tap roots UP

When CARDOX pioneered its first fire extinguishing system, years ago, it was already deeply experienced in the use of low pressure carbon dioxide.

CARDOX created, researched and developed new knowledge and techniques to bring you safer fire protection for your "hot spot" hazards.

With CARDOX Low Pressure Carbon Dioxide Systems,* extinguishment *itself* is lightning-fast. There is no extinguishment damage *whatever*, nothing to be cleaned up or removed after the fire is out. CARDOX Carbon Dioxide can be applied *in mass* — a few hundred pounds or many tons — for single or multiple hazards, whether similar or diverse. For such hazards as those involving handling, storage or use of flammable, volatile liquids — motors, generators, and other electrical equipment — quench

tanks — paint spraying — record storage, etc. — CARDOX provides a degree and scope of protection difficult or impossible to attain by *any other method*.

In the whole field of fire protection, CARDOX alone has *concentrated* in low pressure carbon dioxide. Its experience is further firmly rooted in thousands of *successful* installations. Every part and component in today's CARDOX Systems is the result and refinement of this unduplicated, continuous experience.

It's no wonder, therefore, that carefully drawn specifications often call for "CARDOX only" — because *only* in CARDOX will you find these years of special "know-how." This is the priceless "extra" you can't buy, except in a CARDOX System.

For further valuable information — or a complete survey of your critical hazards, please write. No cost or obligation, of course.

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Foreign Patents
Issued and Pending

CARDOX — The Name for Experience in Low Pressure Carbon Dioxide
Circle Item No. 15—Reader Service Card

Ready for Fire

—From page 29

The National Cash Register Company regards its fire-fighting team with justifiable pride. To L. J. Light, foreman of General Service, and John Moore, job foreman of the fire brigade, goes much of the credit for the fine training given their men and for the maintenance of the complicated equipment.

But even with the best of teams there is always the possibility that a fire could get out of hand. For added protection, should such an event occur at NCR, there is a regular city fire box on the wall at the central station.

Should it be necessary to get outside help, the operator of the central station is immediately notified and he sends an alarm to the Dayton Fire Department.

Constant testing of alarms and valves is required to make certain that all are functioning properly.

When Fire Breaks Out

Fighting fire is a much more complicated operation than merely squirting the contents of an extinguisher or turning a hose stream on the blaze. Here are the steps followed by the NCR fire brigade when fire is discovered.

Let us suppose that fire breaks out in a trash barrel and scatters burning paper over the floor. Department employees as well as the fire fighters have been trained in how to meet the situation.

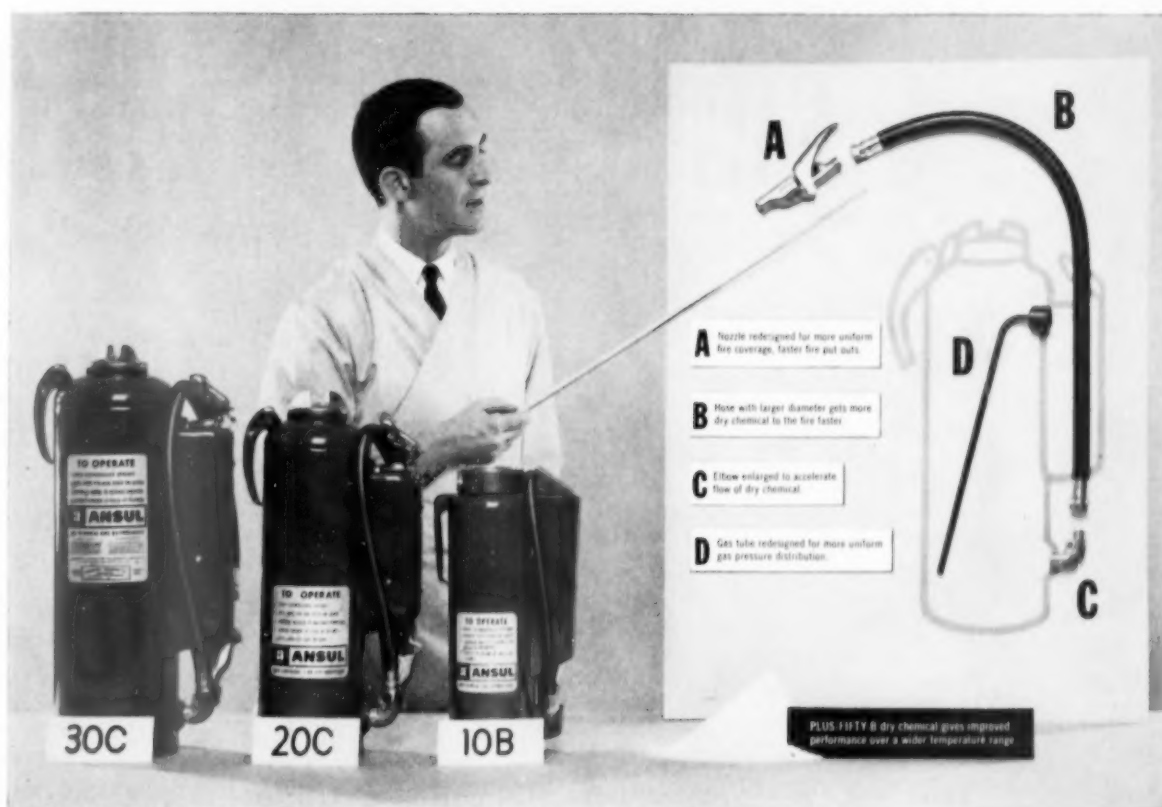
1. An employee quickly calls in the alarm on the nearest phone. The number is easy to remember — 111.

2. At the central station, an operator sets up an alarm on the board.

3. A fireman takes a CO-2 extinguisher from the rack and heads for the fire. At the same time another fireman grabs a soda-acid extinguisher from the rack nearest the fire. One of them can be used safely on almost any type of industrial fire.

4. Meanwhile, two electricians rush to the power room of the building and shut off the electricity to the section near the fire.

5. Outside the building a fire-
—To page 41



Important design improvements in these Ansul Extinguishers give you more fire fighting power at no increase in price. Three years of research and more than 2000 fire tests turned up some significant new information on dry chemical extinguishment. Ansul engineers were able to design these findings into three new extinguisher models, the 10B, 20C and 30C. Result, greatly increased fire fighting power. All Ansul equipment is backed by a five-year warranty. This is the best way we know to say Ansul fire extinguishers are the finest of their kind made anywhere.



The Ansul Chemical Co., Marinette, Wisconsin



FACTS ABOUT FIRE

Compiled by National Fire Protection Association

- Year's total loss in United States and Canada, \$1,385,000,000 (NFPA preliminary estimate).
- 430 large-loss fires (more than \$250,000) in the United States and Canada, as compared with 316 in 1955.
- Total direct loss in big fires: \$330,156,000—previous record loss, \$274,374,500 in 1953.
- Large-loss fires accounted for 24 per cent of the total loss, although less than 3/100 of 1 per cent of the total of all types of fires.
- Industrial large-loss fires formed the largest single classification among the eight into which the study was divided. There were 117 large industrial fires as compared with 78 in 1955.
- The industrial toll was the highest in history and is the principal factor behind the huge over-all increase in fire losses in North America in 1956.
- The 14 large-loss church fires equalled the total of such fires for the preceding three-year period.
- There were 21 large school and college fires; only 10 the previous year.
- The experience in 24 large-loss residential and institutional fires—more than double any recent year's total—emphasized that there is no guarantee of prompt discovery of fire, even in occupied buildings.
- The need generally in large occupancies is more prompt discovery through standard watchman protection, standard automatic fire alarms, or standard automatic sprinkler systems.
- Lack of these measures was cited as the major factor in 43 of 50 warehouse fires and 46 out of 53 store fires.
- There were 401 deaths caused by large-loss fires. Of these, 333 were in aircraft fires. Previous year's toll was 296.
- Largest structural fire occurred in Brooklyn when the Luckenbach Steamship Company pier was the scene of both a fire and an explosion. Ten persons were killed and total loss was \$7,600,000.
- Majority of large-loss fires—320—occurred in buildings. In 260 of the building fires, "structural fire protection weaknesses played a significant part in the extent of the damage."



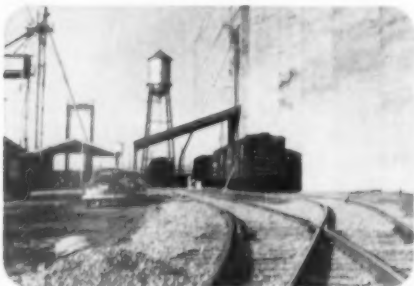
LOOK...AT THIS EASIER, THRIFTIER WAY TO STOP WEEDS



COMPARE THE RATE — Enough UREABOR weed killer to treat 12 square feet is held in this hand! Consider the convenience and economy afforded by a rate of application as low as 1 lb. per 100 square feet of area.



COMPARE THE EASE — Applying UREABOR weed killer is as easy as walking! By actual test, one man spreading this granular material dry with the PCB Spreader can cover a given area in less time than can a two-man spray crew.



COMPARE THE RESULTS — The killing effect of UREABOR continues throughout a season or more! A single application can mean a weed-free surface. Plants from coast to coast are using UREABOR to get the lasting control it provides.



COMPARE THE COSTS — UREABOR kills weeds for pennies; saves you dollars! It is low priced... your initial outlay is small. Further economy comes from low rates of application, savings of man-hours, and convenience in handling and storage.

COMPARE...

30 MULE TEAM[®]
UREABOR[®]
WEED and GRASS KILLER



The PCB Spreader applies Ureabor quickly and uniformly at low rates. It holds enough Ureabor to treat up to 2500 sq. ft. without refilling. Available for \$10.75 delivered — anywhere in U.S.A.



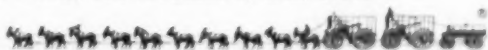
UREABOR invites comparison with all other weed killers from any standpoint. What is your gauge of measurement? Is it **EFFECTIVENESS**? ... **SAFETY**? UREABOR is effective and safe in every respect. It is *nonflammable, noncorrosive* to ferrous metals, *nonpoisonous* when used as directed. No product is easier to apply... there is nothing to mix; no water to haul. Check all the advantages of UREABOR and you'll agree that it stands alone. Write for literature.

AGRICULTURAL SALES DEPARTMENT

United States Borax & Chemical Corporation

PACIFIC COAST BORAX COMPANY DIVISION

630 SHATTO PLACE, LOS ANGELES 5, CALIFORNIA



Circle Item No. 17—Reader Service Card



COOL HEADS IN "HOT SPOTS" WON'T LET YOU DOWN

On jobs where the air is foul or hot, men can't be blamed too much for letting up now and then. If you want to keep their efficiency and morale high, feed them better air.

Employers have learned the value of putting Coppus Blowers and Ventilators on the job . . . in confined areas and near furnaces or hot processes. The men work faster, do better work, work longer without fatigue — and appreciate the more comfortable working conditions.

Give some thought now to the "hot spots" in your plant. There is a

Coppus Blower for practically any requirement — Cable Manhole and Tank Ventilators, Boiler Manhole Blowers and Exhausters, Heat Killers, Shiphold Ventilators, etc. The Coppus "Blue Ribbon" is your assurance of design and construction planned for plenty of severe service. Check and mail the coupon for specific information. Coppus Engineering Corp., Worcester 2, Mass. Sales Offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY, CHEMICAL ENGINEERING CATALOG, REFINERY CATALOG.



COPPUS ENGINEERING CORP., 127 PARK AVENUE, WORCESTER 2, MASS.

Please send me information on the Blowers that clear the air for action.

☐ in tanks, tank cars, drums, etc.

☐ in underground cable manholes.

☐ in aeroplane fusilages, wings, etc.

☐ on coke ovens.

☐ on steam-heated rubber processes.

☐ on boiler repair jobs.

COOLING:

☐ motors, generators, switchboards.

☐ wires and sheets.

☐ general man cooling.

☐ around cracking stills.

☐ exhausters, welding fumes.

☐ stirring up stagnant air wherever men are working or material is drying.

NAME

COMPANY

ADDRESS

CITY

(Write here any special ventilating problem you may have.)

Circle Item No. 18—Reader Service Card

Ready for Fire

—From page 36

man supervises the post indicator valve to make sure it is operating.

6. Only seconds after the alarm has been turned in, firemen are fighting the blaze. Seeing that it is a trash fire, the soda-acid extinguisher is used. Another fireman brings up the hose while another controls the valve. Another soda-acid extinguisher and the CO-2 unit are in reserve.

7. If the fire is not immediately brought under control, all gas to that area is turned off, while at the same time . . .

8. . . steam and compressed air are also turned off.

9. The fire is out. Extinguishers are left on the scene until they can be checked.

10. Automatic sprinkler heads in the area are checked.

11. The area is cleared of fire-fighting equipment and the hose carefully rewound.

Editor's NOTE: From time to time, *NCR Factory News*, the employee publication of National Cash Register Company, carries feature stories describing the company's safety activities. This article has been adapted from a recent series featuring the fire protection program. Illustrations were made available through courtesy of *NCR Factory News*.

Fire Protection for Windowless Plants

Plants without exterior windows introduce new fire-fighting problems, many of which can be avoided by preplanning. Problems are more complicated in multistoried buildings with combustible floors and roofs.

Lack of access and delay in use of hose streams from outdoor hydrants may hamper extinguishment when there are no windows. Another difficulty is lack of ready means of smoke ventilation.

Automatic sprinklers will extinguish an ordinary building fire. But, if the fire is shielded, or if sprinklers happen to be shut off, serious consequences are likely.

Heat and smoke make it difficult to locate and attack a fire. This is further complicated when the lighting system is out of serv-



**A new plant next door
can increase FIRE HAZARD
on your side of the fence!**

**As industrial areas grow
more crowded,
the need for complete
fire protection mounts.**

**To the normal hazards in
your own plant
must be added those
of new neighbors.**

**Be sure that your flammable
liquids are protected!**

**Ask for specialized
suggestions from
National Foam.**

NATIONAL FOAM System, Inc.
West Chester, Pa.



The only company exclusively engaged in the design, development and manufacture of foam fire protection equipment and chemicals.

Circle Item No. 19—Reader Service Card



BUFFALO

carbon dioxide EXTINGUISHERS

with squeeze grip valve

INSURE INSTANT, DEPENDABLE PROTECTION!

Reach for a Buffalo Carbon Dioxide extinguisher, you're sure of instant, sure-fire action! Each extinguisher is designed to give rugged, dependable service and maximum protection against all hazardous flammable liquid and electrical fires. Operation is extremely simple... just point the horn as close to the base of the flames as possible, pull the lock pin and squeeze... instantly a clean, odorless, inert carbon dioxide gas is expelled under pressure and snuffs out the flames in seconds!

Buffalo Carbon Dioxide extinguishers are available in 2½, 5, 10, 15, 20, 50, 75 & 100 lb. models, and bear Underwriters' Laboratories, Factory Mutual and Coast Guard approval.

Buffalo squeeze grip valve with open lock, standard on all hand portable carbon dioxide models.

Buffalo's special squeeze grip valve insures instant operation, no lost time or carbon dioxide. They are positively leak-proof and are equipped with a safety disc and recoil preventors for added safety.

**BUFFALO FIRE APPLIANCE
CORPORATION
DAYTON 1, OHIO
ESTABLISHED 1895**

**ORDER BUFFALO
FIRE PROTECTION FROM YOUR
INDUSTRIAL DISTRIBUTOR TODAY!**

he's listed in the yellow pages



*the right extinguisher for every
fire hazard... plus a complete
line of brass goods and hose*

ice. If the fire is so severe the building cannot be entered, and if the building has combustible floors and roof, destruction is almost certain.

Air-conditioning equipment can be arranged for smoke-ventilation use in case of fire. This is contrary to usual practice for buildings of conventional construction, where air conditioning is shut down at a fire's start, and the area vented by opening doors and windows.

To remove smoke by air conditioning, it is necessary to provide:

- Louvers in outside walls which will open at low positive pressures.
- Fire dampers in return duct systems arranged for automatic closing by thermostats or photoelectric cells in case of fire.

Additional exits for personnel and means of access for firemen and hose streams may be necessary. * * *

Plant Shutdown Ahead? Check These Items

1. Remove all waste material from machines, benches, tables, and oily work clothing from lockers.
2. Clean flammable residues from ovens, spray booths, hoods and ducts.
3. Remove solvents, cements and all flammable liquids to safety vaults.
4. Disconnect unused gas and electrical equipment, close main valves and open main switches where possible.
5. Check fire extinguishers, fire pumps, hose, and fire-fighting equipment.
6. Check water pressure for sprinkler system.
7. Check piled stock for obstruction to overhead sprinklers.
8. Clean plant thoroughly of all debris; keep aisles clear and open.
9. Appoint standby crews or watch service for shutdown period.
10. Notify Fire, Police, ADT and other services.

The only people who enjoy hearing your troubles are lawyers—they get paid for it.



Give your men the **SAFETY** and **COMFORT** of work clothes treated with **X-12 FLAME RETARDANT**

If your workers are exposed to fire hazards, you'll be thankful you specified work clothes treated with Du Pont "X-12" Flame Retardant. You can relax, too, knowing there won't be complaints about clothes being uncomfortable.

"X-12" lends maximum safety to

clothes and affords full comfort. It penetrates the fabric completely without sealing the pores. Thus, clothing "breathes" freely—an important advantage in hot weather. And "X-12" won't affect the appearance of work clothes, either. Colors remain bright and attractive.

Industrial and commercial laundries can apply "X-12" in an economical one-step operation. Because it is a renewable-type flame retardant, it is easily reapplied after each washing. For additional information about "X-12," clip coupon today.

DU PONT
X-12
FLAME RETARDANT



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Grasselli Chemicals Dept., Rm. N-2533
Wilmington 98, Delaware

Gentlemen: Please send me information about "X-12"

Name

Firm

Address

City State



IMPORTANT in the functioning of an automatic sprinkler system are the valves controlling the water flow. Regular inspection is needed to keep them in working order and to make sure they are open.

Sprinklers on Guard

**They are ready to act when
fire threatens life and property**

ON April 6 of this year, a fire flared up in a waste paper bin in the basement of the J. C. Penney Company department store in Sacramento, Calif. Believed ignited by a carelessly discarded cigarette, this week-end blaze could have been a costly if not disastrous one.

But the blaze fused a single head on the \$3½ million store's sprinkler system, automatically transmitting a waterflow alarm at 7:35 p.m.

Fire fighters found the fire extinguished and stopped the flow of water. The sprinkler system, together with fast response, was credited with preventing heavy damage.

This story of a conflagration prevented by an automatic sprin-

kler system is one that has been repeated again and again since sprinklers were introduced about 75 years ago. In those days five losses at Factory Mutual plants averaged 29 cents per \$100 of value. Today they average about three cents.

The Penney fire points up one of the important advantages of a sprinkler system in today's construction. Basement fires in large commercial buildings present a most important hazard to the human fire fighter. Firemen simply cannot enter many of these basements at the time of fire without unacceptable risks. In these locations the automatic sprinkler is the first line of fire defense.

Sprinklers are needed where any appreciable amount of com-

bustibles—either the building or the contents—are present. Even noncombustible buildings need them to extinguish fire in burnable contents as well as to protect the building from the heat of a fire. For instance, not so long ago a fire in a reinforced concrete building containing rolled paper resulted in a loss of more than \$2 million.

Sprinklers should be located not only to protect the ceiling but also under wide benches or tables, in closets, dryers and other locations which would not be covered by the discharge of the ceiling sprinklers.

Sprinklers are made up of three essential parts: a nozzle, a releasing device, and a deflector.

—To page 64

Circle Item No. 22—Reader Service Card →
National Safety News, July, 1957

**Face the facts of hydraulic fluid fire dangers
in your plant...it may shock you!**

HYDRAULIC FLUID SURVEY

MACHINE USING HYDRAULIC UNIT(S)	FLUID NOW USED	DISTANCE TO IGNITION SOURCE, FEET	IDENTITY OF IGNITION SOURCE	FIRE HAZARD RATING
DIE CAST MACHINE	PETROLEUM OIL	5'	MOLTEN METAL & GAS JETS	EXTREME
TITANIUM STRETCH PRESS	PETROLEUM OIL	14'	HOT DIE & GAS JETS	EXTREME

Write today for your free HYDRAULIC FLUID SURVEY SHEET!

Industries big and not so big are using this easy-to-follow Hydraulic Fluid Survey sheet to make realistic appraisals of the degree of risk they run using flammable hydraulic fluids in the vicinity of an ignition source.

Where costly equipment and personnel are endangered, progressive hydraulics operators switch to fire-resistant Pydraul

F-9... the only fire-resistant hydraulic fluid listed by Underwriters' Laboratories.

Ease your mind about hydraulic fluid fire dangers by using the Hydraulic Fluid Survey sheet to measure and rate your risks. Install Pydraul F-9 where it is needed to keep your production moving and firesafe!

Use the coupon below... there's no obligation.

Pydraul F-9 is the first and only hydraulic fluid listed by Underwriters' Lab. From the Lab's service card: "The fire hazard of Pydraul is rated 2 to 3 in accordance with Underwriters' Laboratories, Inc.'s Standard of Classification in which Ether rates 100, Gasoline rates 90-100, Alcohol (ethyl) rates 60-70, Kerosene (100° F. flash) rates 30-40 and Paraffin Oil rates 10-20."



Pydraul: Reg. U. S. Pat. Off.



Where Creative Chemistry Works Wonders For You

Organic Chemicals Division, Dept. I-73
MONSANTO CHEMICAL COMPANY
800 N. 12th Blvd., St. Louis 1, Missouri

Please send me () free copies of the Hydraulic Fluid Survey sheet.

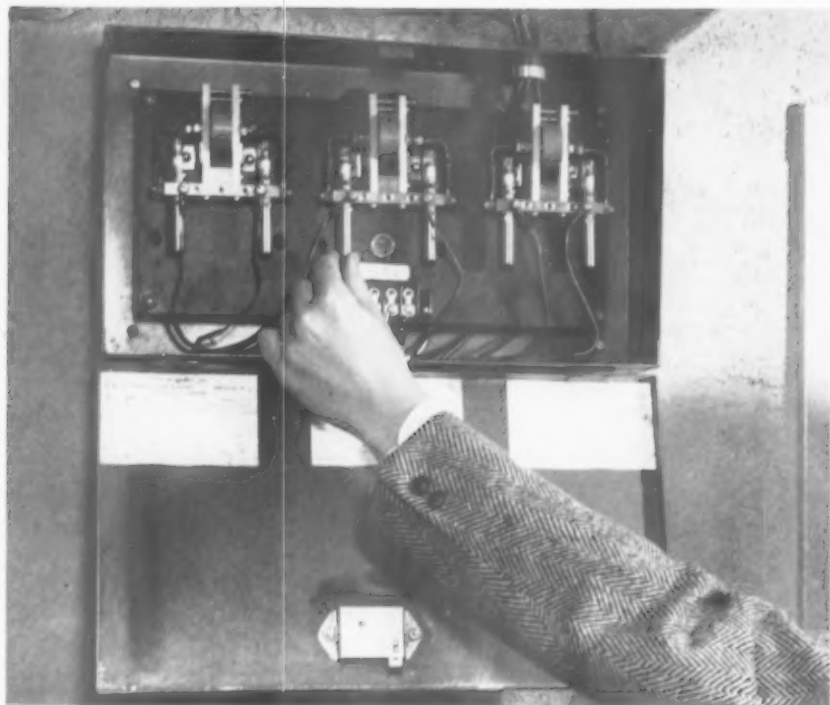
Your name _____

Company name _____

Street _____

City, state _____

ROUND-THE-CLOCK protection for Cornell University's newest dorms is provided by this temperature-rate-of-rise detection system. Should fire occur, expansion of air in copper tubing would close a circuit at the detector and sound an alarm. (Walter Kidde & Co.)



PROMPT DISCOVERY

the key to lower fire losses

THERE WERE 430 "large-loss" fires in the United States and Canada in 1956. The total direct loss was \$330,156,000.

The 1956 totals were considerably larger than those of the previous worst years according to the annual study of the National Fire Protection Association covering fires with individual losses of \$250,000 or more.

In comparison, last year's total of 430 exceeds by more than a third the 1955 high of 316 large-loss fires. The direct dollar loss was greater by \$50 million dollars than the previous record loss of \$274,374,500 in 1953.

Industrial large-loss fires formed the largest single classification among the eight into which the NFPA study was divided. There were 117 such fires as compared with 78 the previous year.

The industrial toll was the highest in history. According to the NFPA, it is the principal factor behind the huge over-all increase in fire losses in 1956.

Three Protectors

The report emphasizes what has been stressed so often in the past—the need for more prompt fire discovery through:

- ... Standard watchman protection
- ... Standard automatic fire alarms
- ... Standard automatic sprinkler systems

Lack of these measures was cited by the NFPA as the principal reason why 43 of last year's large-loss warehouse fires had spread out of control before being discovered.

Delayed detection was a major factor in 53 large-loss store fires.

Analyses of fires for a recent year revealed these significant facts:

... Watchmen were the first to discover 7 per cent of these serious fires but in 16 instances failed to detect them promptly.

... Occupants were the first to discover 40 per cent of the fires.

... In 39 cases notification was delayed following detection.

... In 13 instances occupants fought fires unsuccessfully before calling for help.

Occupants, it appears, cannot be depended upon to detect fire promptly and call fire-fighting forces without delay.

Reduction in the nation's annual fire losses depends largely

BE SAFE FROM FIRE...with Kidde extinguishing equipment

HAND PORTABLES



Trigger
Carbon
Dioxide

Squeeze-Valve
Carbon
Dioxide

Foam
Soda-Acid
Clear Water
Anti-Freeze

Pressurized
Water
Anti-Freeze

Pressurized
Dry Chemical

Cartridge-
Operated
Dry Chemical

Pump Tank
Water
Anti-Freeze

VL
Pressurized

VL
Pump

Kidde hand portables are designed to knock fires out *fast*, come in a variety of types and models. Kidde offers a complete line, a type and size for every need. The Kidde line includes carbon dioxide extinguishers with fast-acting trigger release or squeeze-valve release in capacities of 2½ to 20 pounds. Kidde dry chemical extinguishers can be had in pressurized models of 5 and 10 pounds capacity, and in cartridge-operated models of 20 and 30 pounds. New

Kidde wet chemical extinguishers (foam, soda-acid) are available in 2½ gallon bronze or stainless steel models, including cartridge-operated and pressurized water or water-anti-freeze units. Kidde vaporizing liquid extinguishers come in pump capacities of 1 and 1½ quarts, pressurized in 1 and 1½ quarts and 1 gallon. Kidde pump tank extinguishers, in steel or copper shells, are available in 2½ and 5-gallon sizes.

CUSTOM-ENGINEERED CARBON DIOXIDE SYSTEMS

New Kidde pressure-operated carbon dioxide extinguishing systems are individually designed to fully protect even the most dangerous hazards, use no falling weights or clumsy mechanical triggering methods. Pneumatic Control Heads insure instant and complete carbon dioxide discharge. Directional valves afford protection to more than one hazard using the same bank of carbon dioxide cylinders. All operating parts are self-enclosed for safety. Visual indicators show at a glance if system is "set" or "released."

SMOKE DETECTORS AND KIDDE-ATMO FIRE DETECTING SYSTEMS

Before flames are visible—before heat gives warning, the Kidde smoke detector will sound an alarm at a central station and tell exactly where fire lurks. Even deep-seated smoldering fires are quickly and easily spotted. Kidde-Atmo is a wide-area fire detecting and warning system which, through the principle of rate-of-temperature-rise, sounds an alarm at the first hot breath of fire. Both detecting systems can also close doors, shut off motors or blowers—all automatically.

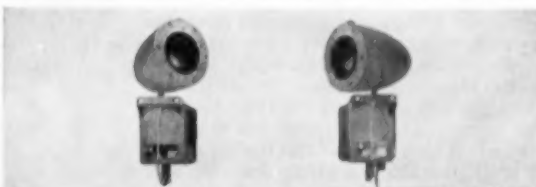
BE SAFE FROM THIEVES...with Kidde burglar alarms!

ULTRASONIC BURGLAR ALARMS



By saturating the protected area with high-frequency sound waves, Kidde's Ultrasonic Burglar Alarm System gives *complete* wall-to-wall, floor-to-ceiling protection. Properly installed, the portable, tamper-proof Kidde system qualifies for an Underwriters' Laboratories number 2 certification. Write today for Kidde's Ultrasonic Alarm Booklet, on the *best* burglar protection at the *lowest* cost!

PHOTO-ELECTRIC BURGLAR ALARMS



By using a beam of invisible "black light," Kidde's tamper-proof Photo-Electric Alarm provides complete burglar protection up to a range of 900', indoors or out. If beam is broken, alarm sounds locally or at central plant station. Rugged, transistorized circuit draws only 6½ watts. Optional batteries keep system in operation if main power fails. Write Kidde for more information.

Kidde



Walter Kidde & Company, Inc., 745 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada Ltd., Montreal—Toronto

Circle Item No. 23—Reader Service Card

upon the success of efforts to prevent large-loss fires. This involves improvements in construction, elimination or control of hazardous processes, installation of automatic sprinklers, training of employees in fire prevention and fire fighting—and means for automatic detection and reporting of fire.

Most large-loss fires involve delay in discovery, delay in calling fire-fighting forces, or both. Automatic detection and alarm sys-

tems compensate for failure of human alertness and judgment. Such systems are effective in minimizing losses of hundreds of fires each year which never make newspaper headlines. Without them the number of disastrous fires would undoubtedly be staggering.

No single automatic fire detection and alarm system is adaptable to all properties. In general, the most effective type is an auto-

matic sprinkler system with central station supervision. Automatic sprinkler systems, according to the NFPA, have a long-time record of 96.1 per cent efficiency in extinguishing fires or holding them in check until fire-fighting forces arrive. Automatic sprinklers are discussed in detail in another article in this issue.

Types of Detectors

Temperature-rate-of-rise. In a typical installation based on this principle, any undue temperature rise in a protected space causes expansion of air in copper tubing mounted inconspicuously on the ceiling. The two ends of the tubing terminate at a detector. The expanded air moving in opposite directions through the tubing enters the detector and acts on two opposing diaphragms. The pressure forces them together and closes an electric circuit. This sounds an alarm.

If a number of spaces are being protected, a designator indicates which one is reporting trouble.

Features in the detector's design eliminate the possibility of false alarms from normal temperature changes and even short sudden surges of heat.

The temperature-rate-of-rise principle makes this equipment extremely versatile. It functions whether the circuit tubing is in a refrigerated area with a temperature of 10 F. or in a heat-treating department where the temperature reaches 100 F. It is the rate-of-temperature rise that actuates the detector, not reaching any fixed temperature.

Installations can incorporate devices which cause any desired type of alarm to sound, turn off or on or close apparatus and provide a means of powering the detector from batteries.

Fixed-temperature thermostat. These are set for some specific temperature well above that likely to occur under normal conditions. When room temperature reaches thermostat temperature, an alarm is sounded. Auxiliary equipment similar to that available for other systems can be included.

—To page 50

WHAT'S HIS LINE? Here's a hint...

He likes weekend work!



This gentleman has an overpowering impulse to separate private property from its rightful owner. He likes to work weekends because he expects watchmen to be less alert then. That's why it is urgent you get the full-time protection of a DETEX tape-recording GUARDSMAN watchclock. The GUARDSMAN gives you tamper-proof mechanical supervision of your watchman not only on week days, but on weekends and holidays. Send for the vital facts.



FREE INSPECTION

Is your watchman's tour giving you maximum protection in light of recent plant expansion? Are your clocks adequate for the job? Are your register keys in good order, the station box screws properly sealed? It won't cost you anything to find out. Our inspector will be glad to make a free analysis to see that you are getting the protection you are paying for. Write or telephone for appointment.



Detex Watchclock Corp. 76 Varick Street, New York 13, N. Y.

- ☐ Please send me complete information about the GUARDSMAN tape-recording watchclock.
☐ You may send a DETEX inspector to make a free, no-obligation survey of our plant protection needs.

Name.....

Company.....

Address.....

Title..... N-7

Circle Item No. 24—Reader Service Card



Factory Mutual Laboratories, Norwood, Mass.

Factory Mutual Laboratories test

SHELL IRUS FLUID 902

the low-cost, fire-resistant hydraulic fluid

Factory Mutual Laboratories, the well-known industrial testing authority, recently evaluated Shell Iru^{*}s Fluid 902.

The tests performed included:

1. Flash Point
2. Autoignition
3. Flame Propagation

The Shell Industrial Engineer can give you more information about these tests.

*Trademark

In plant after plant, users find that Shell Iru^s Fluid 902 is comparable in fire resistance to much higher-priced hydraulic fluids.

SHELL OIL COMPANY

50 WEST 50TH STREET, NEW YORK 20, NEW YORK
100 BUSH STREET, SAN FRANCISCO 6, CALIFORNIA



Combination rate-of-rise and fixed-temperature thermostat. Should the temperature rise be too gradual to actuate the rate-of-rise portion of the detector, operation will occur when a predetermined temperature is reached. The device resets itself automatically. No replacement of parts is needed.

A variation of the fixed-temperature thermostat principle is sometimes used with automatic

sprinklers. Instead of a thermostat, it depends on the fixed-temperature operation of water sprinkler heads. When they go off, water starts flowing through their supply pipes. This flow of water is detected by a device and an alarm is sounded.

Smoke detection. Most fires generate smoke. Deep-seated smoldering fires which generate little heat at the start can be de-

tected with this type of analyzing equipment. These devices will usually give an alarm before flames break out.

Smoke-detection equipment is flexible in arrangement. A single room, several rooms, or a very large space, such as zoned warehouse, can be protected simultaneously.

In a typical installation, such as several storage rooms, each space has one or more smoke accumulators which are connected by piping to a centrally located smoke detection cabinet. A separate line is provided for each space. Air samples are drawn in sequence from each protected space and passed through the piping to the smoke detection cabinet.

In the cabinet each sample passes through an analyzer tube comprising a beam of light and photoelectric cells. If a sample contains smoke, the smoke reflects onto the cells and increases their output. The increase in output causes an alarm to sound and an indicator on the cabinet designates the area from which the smoke-laden sample was drawn.

Alarms for smoke detection systems may ring only locally, be flashed to a central station or to municipal fire department. Auxiliary devices may cause lights or other electrical equipment to be turned on or off, doors to open or close, or other protective measures performed automatically.

Battery-operated units which provide power for uninterrupted operation of the detector in the event of failure of the regular power system are available.

Another type of detector uses a radioactive element in a small ceiling-mounted chamber and operates when there is a change in ionized air. Presence of heat or smoke will cause this change and send the alarm signal to a monitor panel located at a distance from one or more of the detectors.

Photoelectric cells are also used to detect fires directly. The device is mounted on the ceiling to permit unobstructed observation of the area to be protected. If fire occurs, a flicker—infrared light at a specified number of cycles per second—acts on the photoelectric

only 8¹/₄" HIGH!



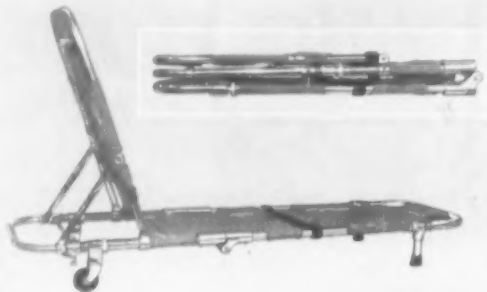
NEW Washington Ambulance COT!!

Now you can get an ambulance cot that is **REALLY LOW**—only 8¹/₄ inches high—the perfect answer for cars that have less head room, and for overhanging stretchers. The new Washington model 21-1, is of special value for heart cases, and other patients who must be kept in a sitting position. Washington's famous top-quality craftsmanship is apparent through-

out this new model cot with such features as sturdy, rigid construction . . . highly polished aluminum tubing and castings . . . very lightweight yet strong . . . trigger release side rails . . . adjustable back rest with nine-position squeeze-lock adjustment. It always pays to choose Washington for the newest and best in all emergency room or vehicle requirements.

ADJUSTABLE-BACK EMERGENCY STRETCHER MODEL 9AB

Four adjustable positions on back rest, folds to only 4¹/₂ inches high! One of Washington's complete line of folding emergency stretchers for every need, in every price range.



NEW PUSH-TYPE COT FASTENER MODEL 3A



This new and improved cot fastener holds cots securely in station wagons and other types of emergency vehicles. Washington makes four other models of cot fasteners, to meet every need for any kind of vehicle. Tell us the make and model of your vehicle, and we'll recommend suitable fasteners.

See your jobber or write for **FREE** catalog!

Washington Products Co.
WASHINGTON COURT HOUSE, OHIO

Circle Item No. 25—Reader Service Card

Circle Item No. 27—Reader Service Card



Your next small fire could ruin your business!

One cigarette out of the 400 billion smoked every year can destroy your livelihood—your plant—unless you have effective fire-extinguishing equipment on hand.

Whatever the fire—combustible solids (Class A), flammable liquids (Class B), or electrical

(Class C)—Pyrene-C-O-Two has the quality extinguisher for your needs. Call your local Pyrene-C-O-Two distributor today! He carries a complete line of *safety-engineered* extinguishers, systems, brass goods, hose and accessories. Or write to:



Underwriters'
Laboratories
and Factory
Mutual Approved



PYRENE-C-O-TWO DIVISION

THE FYR-FYTER COMPANY

Dept. NSN, Newark 1, New Jersey

BRANCHES IN ATLANTA • CHICAGO • DALLAS • DETROIT • SAN FRANCISCO

cell which causes a control panel to sound an alarm.

Single station alarms. This type of detector is a self-contained detection and warning device. A charge of freon gas is confined in a cylinder by a pellet of fusible metal. The pellet is softened by heat and ejected by gas pressure, allowing the freon to activate the alarm horn. The horn has a sound volume of 120-125 db. By use of tubing extensions, the horn can

be located at a distant spot where it would be most likely to attract attention.

Units are hung on screws or hooks as close as possible to the ceiling in areas to be protected, as in stairwells, elevator shafts, storage rooms, living areas, detached buildings.

Available models operate at 136 F. and 174 F. The first is for use in areas where the ambient temperature does not exceed 100 F. and the second where the tem-

perature does not exceed 150 F.

These detectors can be manifolded into a system with tubing. The detectors can be placed in critical areas and the alarm itself installed where it is most likely to attract attention. They are non-electrical.

Any of the types of detection devices described here will give protection if selected for the occupancy and installed properly. Be sure the system has Underwriters' Laboratories approval and meets state and local laws for the class of building to be protected.

DON'T GAMBLE WITH SAFETY



GET MORE PROTECTION WITH THE GILBARCO ELECTRONIC INDICATING GROUND

Wherever highly volatile liquids are loaded — bulk plants, tank farms, or terminals — be sure of proper grounding. Install the Gilbarco Electronic Indicating Ground.

POSITIVE—Establishes ground and indicates its safety by either light or audible signal.

SAFE—Reveals faulty grounds caused by cable defects, paint, corrosion or carelessness which lead to fires.

SIMPLE—Gilbarco's electronic ground is easily installed in any grounding circuit. Furnished complete with clamp and cable.



Gilbarco
Gilbert & Barker
Manufacturing Company
West Springfield, Mass.
Toronto, Canada

Circle Item No. 28—Reader Service Card

Smoke Can Be As Deadly As Flame

Some 74 per cent of all dwelling-fire victims die upstairs from downstairs fires—asphyxiated by toxic gases—according to the National Fire Protection Association. In public places too, and even among firemen, smoke, hot gases and toxic fumes take their toll. Here are a few suggestions to remember:

The worst concentrations of carbon monoxide are usually found in the first stages of a fire, especially in a slow starter. (Two breaths of air containing 2 per cent CO can kill in 3 minutes.)

A smoky fire in a confined place is best left alone. Close the door and call the fire department.

The danger of smoke cannot be judged by its color or density. Thin smoke may be toxic.

Air near the floor may be coolest but it may contain poison gases (such as hydrogen sulfide) which are heavier than air.

When escaping thru smoke it is better for a person to breathe deeply two or three times rather than to just gulp a single breath and run. Deep breaths can be held much longer. Too, CO, even in small amounts, affects a person's reasoning. Anyone who has been through a fire, therefore, should be watched carefully. Persons having escaped from a burning building have been known to run back in.

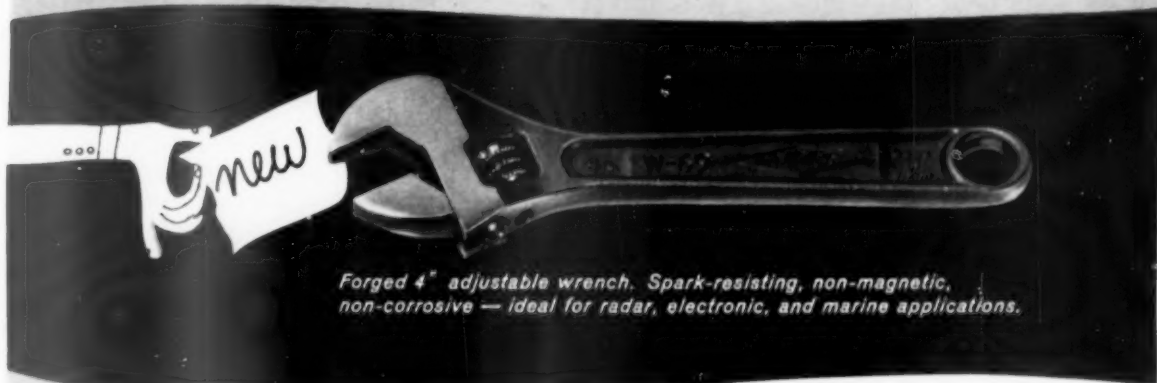
The highest tuition is often paid in the school of experience.



Don't take chances-use **AMPCO SAFETY TOOLS !**

The most complete line available

Approved by Factory Mutual Laboratories for use in hazardous locations



Forged 4" adjustable wrench. Spark-resisting, non-magnetic, non-corrosive — ideal for radar, electronic, and marine applications.



FREE CATALOG!

Tells how to choose the right safety tool for every application. Lists more than 400 types and sizes. Tear out coupon and mail today!



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West Coast Plant: BURBANK, CALIFORNIA
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AMPCO METAL, INC.
Dept. NS-7, Milwaukee 46, Wis.

Send me Catalog ST-10

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Company _____
Address _____
City _____ Zone _____ State _____

Your Guides to Effective Fire Protection

Look for the label of a recognized testing laboratory on all apparatus and follow standards developed by national organizations

RESearch and testing have developed high standards of industrial fire protection through:

1. Solving fire protection problems.
2. Improving existing products.
3. Developing new products.
4. Furnishing proof of the performance of these products through exacting laboratory tests.

Selection and purchase of fire protection equipment must be based on assurance that the devices specified are reliable and will give good service and, equally important, that they are suitable for the intended use.

The user of fire protection equipment has two authoritative guides:

1. *Fire Protection Equipment List*, issued by Underwriters' Laboratories, Inc., 207 E. Ohio St., Chicago 11. Other U-L lists applicable to fire protection cover electrical equipment, electrical equipment for hazardous locations, and gas, oil and miscellaneous appliances.
2. *Approved Equipment for Industrial Fire Protection*, issued by Associated Factory Mutual Fire Insurance Companies, 1151 Boston - Providence Turnpike, Norwood, Mass.

Classes of equipment listed are:

1. Those used for the control and extinguishment of fires and the prevention of explosions.
2. Those that in themselves would present serious fire and explosion hazards if not properly safeguarded.
3. Building materials with varying degrees of fire resistance.

Not all products used in fire protection are listed by each organization but the two lists cover practically the whole field of fire protection. The testing and approval services of both Underwriters' Laboratories and Factory Mutual Laboratories date back before the turn of the century.

Before approval is granted, sample units from the manufacturer's regular production are subject to careful examination and thorough laboratory tests.

The services of testing laboratories to manufacturers and eventually to the public represent the independent judgment of the organizations, with due consideration of the necessary limitations of the practical operation. Procedure is similar in the more important details.

Examination and testing of products are conducted by technically trained and experienced engineers under laboratory conditions which simulate those that might be encountered in the field.

Of equal importance with the examination and test work is the inspection and follow-up program in the factories of clients and in the field.

The application for tests gives a complete description of the product in order that its character, purpose, size, rating, and other features may be understood. This information makes it possible to classify the product and determine, at least in a general way, the probable nature and extent of the necessary examinations and tests.

Listing is generally limited to items which are produced commercially and the actual manufacturer known. While articles in

the model states may be examined, tested and a report made, such a report does not imply acceptance of those articles in commercial form. These should be submitted later for final examination and test.

A follow-up program serves as a formal check on the supervision which the manufacturer exercises to determine compliance of the product with the applicable requirements of the laboratory.

Listing does not mean that products in the same classification are necessarily equivalent in quality or performance. It does, however, mean that they meet definite standards.

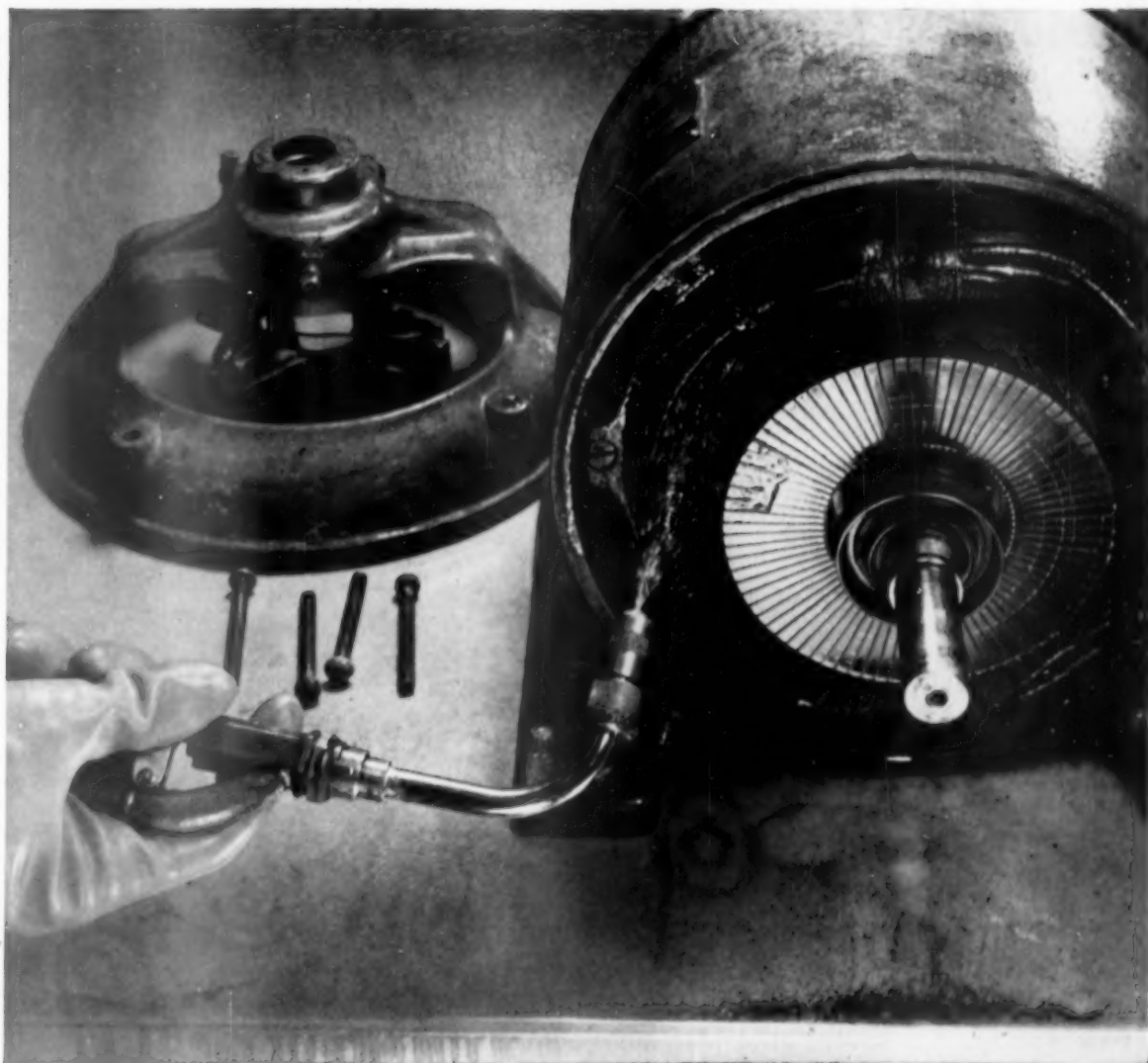
Local authorities having jurisdiction should be consulted in all cases as to the particular requirements covering installation and use of devices and materials listed.

Organizations, Standards and Literature

There are several organizations engaged in the engineering, educational and statistical phases of fire protection. Many others carry on fire protection activities among the services to their respective groups. Standards have been compiled to cover practically all fire protection problems and there is a wealth of literature available.

Leader in the field is the National Fire Protection Association, organized in 1896 and incorporated in 1930. This noncommercial, nonprofit association has members in all parts of the world and is truly international in character. The personnel of its technical committees include the foremost experts in the field. The committees are made up to insure

—To page 62



New solvent cleans fast, with greater safety

Chlorothene makes electric motor cleaning easy, reduces fire and toxic hazards

Electric motors can now be cleaned by spray methods with greater ease and safety than ever before. Chlorothene®, the new specialized cold cleaning solvent developed by Dow, quickly and thoroughly removes greases, oils, tars, waxes and lubricating compounds.

And look at this safety story: Chlorothene has no flash or fire point by standard methods. Its M.A.C. (Maximum Allowable Vapor Concentration) rating is 500 ppm—that simply means that Chlorothene is less toxic than other solvents commonly used in electrical cleaning. These facts mean lower fire hazard

and lower toxic hazard—greater safety than ever before for your plant and your men!

Chlorothene is now the solvent of choice for practically every cold cleaning job, and every method of application—spray, dip, wipe and bucket.

You can find out more about Chlorothene from your Dow solvents distributor who also supplies Dow Trichloroethylene, Dow Perchloroethylene and Dow Methylene Chloride. THE DOW CHEMICAL COMPANY, Midland, Michigan, Department SO1017E.

YOU CAN DEPEND ON



How to set your mind at rest about

YOU can't be expected to know *all* the answers about every type of fire hazard. But Grinnell, with 87 years' experience protecting against fire hazards of every description, has thorough background knowledge upon which you can draw. Let a Grinnell Fire Protection Engineer recommend the best system for you . . . whether it be water spray, air foam, carbon dioxide, or dry chemical.

FIRE!



WATER SPRAY PROTECTION Asphalt coating machine at Alabama Pipe Company, Anniston, Ala., has a Grinnell ProtectoSpray System.



AIR FOAM PROTECTION Engine test cell at Trans World Airlines, Inc., Kansas City, Mo., is protected by a Grinnell ProtectoFoam System.



DRY CHEMICAL PROTECTION Hot oil dip tanks at Royal Canadian Air Force Supply Depot, Namao, Alta., has a Grinnell dry chemical installation.



CARBON DIOXIDE PROTECTION Record storage vault at West Penn Power Company, Greensburg, Pa., uses a Grinnell carbon dioxide installation.

Remember, extra hazardous areas, where special protection must be provided to insure against possible serious loss by fire, are fairly commonplace in industry today. Illustrated here are a few of these, along with the fire protection systems recommended to arrest fire. But there are many others, where major or minor supplements to ordinary-hazard fire protection systems are necessary, if trouble is to be averted.

With a full range of equipment, you can rely on Grinnell to give you unbiased recommendations on the system best suited to your requirements. Remember, too, the installation of the proper Grinnell System usually serves to reduce fire insurance premiums drastically, often pays for itself in a few years. So don't delay. For further facts, write Grinnell Company, Inc., 264 West Exchange Street, Providence, R. I. Branch offices in principal cities.



—Manufacturing, Engineering, and Installation of Fire Protection Systems since 1870—

GRINNELL

WHENEVER FIRE PROTECTION IS INVOLVED

Circle Item No. 31—Reader Service Card

Unwanted Vegetation

Keeping down weeds
removes hazards of
fire, rust and rot

CONTROL of unwanted vegetation on industrial plant sites, parking lots, storage yards, railway sidings, roads, ditches, and many other places of industrial activity has become an essential part of industrial plant maintenance.

Hazards associated with unwanted vegetation—often referred to as weeds—on industrial plant sites are many. Probably of first importance in general plant maintenance is the fire hazard associated with growth of such vegetation. Weeds and grasses take over and grow vigorously in store yards, and on tank farms where liquid fuels are stored. They grow in parking lots and around plant structures where hand pulling or cutting is an expensive and never-ending task. When these weeds are mature and dry, they present a tremendous fire hazard.

Unwanted vegetation is a constant menace to numerous plant installations in encouraging rot and corrosion. Roots of weeds grow into railroad crossties and the moisture that they hold encourages fungus rot. The same is true with wood foundations, wood posts, and stock piles of lumber and timber. Growing along fences or in store yards where metal stocks are stored, they greatly accelerate corrosion. Above ground steel piping and fittings and the bases of posts and wire of chain link fences corrode and need replacement more frequently where uncontrolled vegetation protects these installations from the drying action of sun and wind.

Weed growth on factory sites reduces employee efficiency and may be responsible for many accidents. A rank growth of weeds hides lurking objects in areas where employees must walk, such as along railroad sidings and

WHICH *Scott Safety Breathing Equipment* IS THE BEST FOR YOU?



Scott Air-Pak Model 6000-B4A

This is the "Sling-Pak" model especially recommended for fast emergency work where seconds count. Complete unit weighs only 19½ pounds. Tank holds 22 cubic feet of cool fresh air—enough to protect the wearer for at least 15 minutes at extreme exertion. Offers complete breathing protection at lowest cost.

Scott Air-Pak Model 6000-A2MS

The "Back-Pak" model carries the air cylinder on a comfortably shaped aluminum back plate. Complete weight approximately 29 pounds. Will give breathing protection at extreme exertion for a minimum of 30 minutes.

BUREAU OF MINES
Approval No. 1308



Scott Extension Model 6000-C6

Permits safe, comfortable breathing for any number of workers at any distance from supply cylinder. Recommended for operations of 5 to 8 hours at extreme exertion. 6000-C5 same but with reserve air supply egress bottle.

VISIBILITY UNLIMITED with the incomparable SCOTTORAMIC Mask

All Scott Air-Paks can be supplied with the new Scottoramic Mask that affords unlimited vision in all directions. It enables the wearer to spot danger zones quickly for added safety.



Celebrating a Quarter of a Century of Progress

SCOTT AVIATION CORP.
211 ERIE STREET LANCASTER, N. Y.
Canada: Safety Supply Co., Toronto — Branches in principal cities
Export: Southern Oxygen Co., 15 West 57th Street, New York 19, New York

Circle Item No. 32—Reader Service Card

switches and in areas adjacent to parking lots. When wet with dew or rain, weeds present a hazardous and slippery surface on which men must walk.

Many weeds present a health hazard to employees due to the allergies associated with such species as ragweed. Other examples are the poisonous plants such as poison oak and poison ivy. Additional employee benefits result from the neat appearance of plant grounds and installations where

control of unwanted vegetation is as much a part of the maintenance program as the landscaped frontage, well kept lawns, ornamental plantings, and orderly shop conditions.

Where asphalt paving is used for parking lots, walkways and roadways, weeds grow under the asphalt topping or encroach along the edges of the asphalt areas, soon ruining the surfacing and building up a constantly recurring maintenance cost. With this prob-

lem, the solution lies in treating the sub-grade with a good soil sterilant before the asphalt is applied. Sodium borates or borate-sodium-chlorate mixtures are most efficient in this use. Such treatments are now standard specifications on such installations throughout much of our industrial area.

Control of weeds on lawn areas has become a relatively simple problem and is normally handled by plant gardeners. Dandelion, chickweed, and simple broad leaf pests can be readily and safely controlled with various formulations of 2, 4-D, often in a dry, granular form or combined with suitable fertilizer.

Crab grass can now be readily controlled with a number of commercial formulations of weed killers without hazard to desirable grasses on lawns and park areas. The chemical formulations used to control these unwanted broad-leaf weeds in established turf grasses are known as selective weed killers, in that they destroy only the unwanted vegetation.

Examples of selective weed killers are the several brush killer formulations widely used for the control of undesirable woody species such as poison ivy, willows, or sumac in grassed areas without appreciable injury to the desirable grasses.

The major problem with undesirable vegetation on plant sites, however, is encountered on areas where complete elimination of vegetation of all types is desirable. On such areas the nonselective soil sterilant types of herbicidal chemicals offer maintenance or safety engineers an efficient and economical means of handling the problems that have heretofore been assigned to hand labor. With the present high cost of man power, this practice is rapidly being discarded in favor of the more practical, more economical method of chemical control.

Pacific Coast Borax Company Division of the United States Borax & Chemical Corporation has pioneered the development of industrial weed control and has made a number of new developments that are being included in plant maintenance programs



Power failure and sudden darkness bring

PAINFUL INJURY

... but Exide Lightguards* go on automatically when lights go out—prevent sudden darkness. They protect you against the risk of injuries. Plug into your regular outlets. Built-in automatic charger. Batteries last for years. Choose from four models. Send coupon today.



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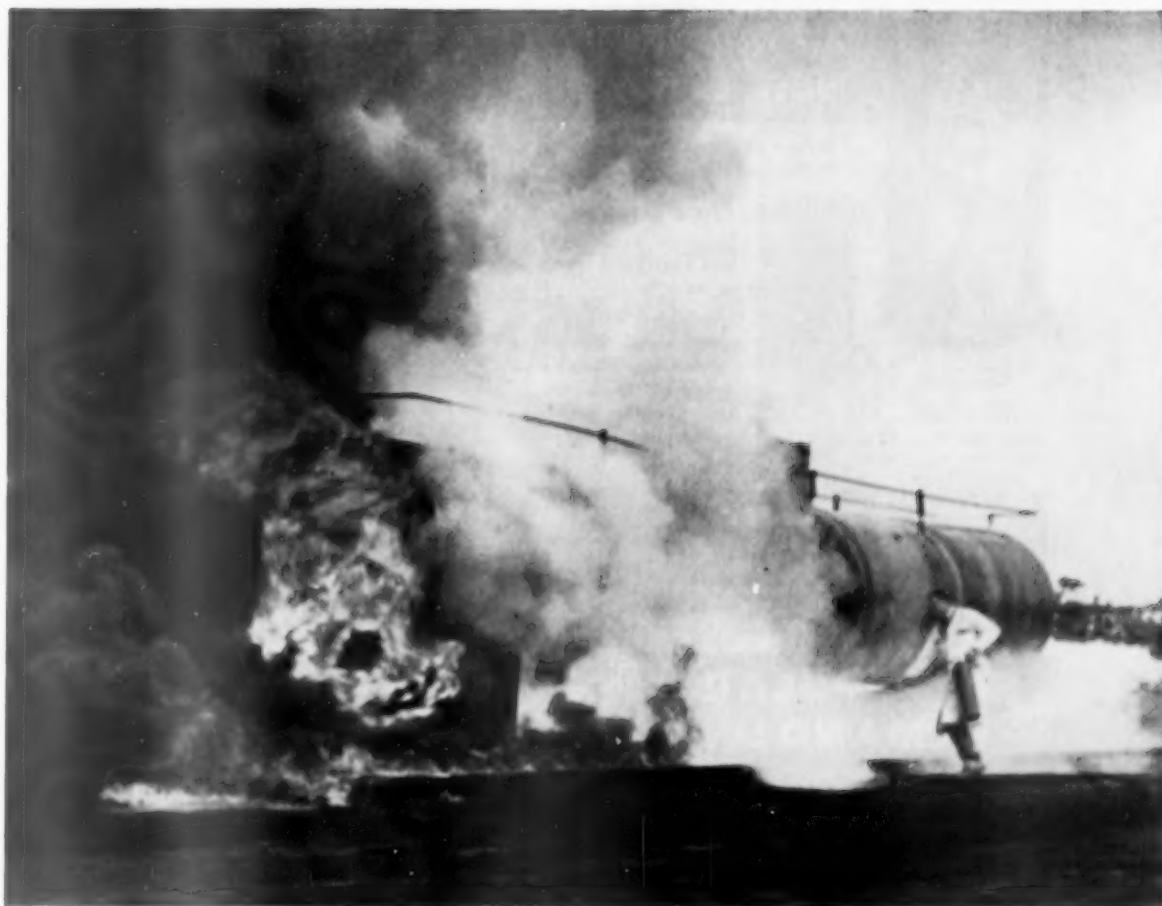
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BIG FIRE?



*30,000 Gal. Fuel Tank at New Haven, Fire Dept. Training Grounds

YOU BET IT IS...

... and Safe-T-meter *high-pressurized*
DRY CHEMICAL fire extinguishers,
with longer range, can handle it!

NATION-WIDE SALES AND SERVICE



PRODUCTS CORPORATION
ELMSFORD, NEW YORK

when Seconds count



EMERGENCY BLANKET and Quick Release WALL CANISTER

Allows for conspicuous placement throughout the work area. Blanket releases instantly or entire unit may be lifted from the wall and carried to point of use.



Canister is of heavy gauge metal, 8½" diameter by 20" high. Bright red enamel finish. Woolen or asbestos blanket may be furnished.

WRITE FOR
BULLETIN NO. 94



Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2850 N. Fourth Street

Philadelphia 33, Pa.

BY POPULAR DEMAND!

..... A NEW JUMBO SIZE SIPCO DUNKING STATION

Specially designed for use in plants where SIPCO DUNKING STATIONS receive more than average use. Goes shift after shift without attention, greatly reducing cleanup time. Heavy duty cast aluminum canister. Guaranteed 3 years against breakage. Interchangeable with standard size canisters on any model SIPCO DUNKING STATION.



**PRESENT
SIPCO USERS!**
Order NEW JUMBO size canisters separately. They are interchangeable with your present standard size units.

UNIT No. 1J—Heavy duty cast aluminum JUMBO canister, attractive eye-catching metal sign, upright and heavy weighted base. 42" high, wt. 26 lbs.

UNIT No. 2J—Same as above except without upright and base. For mounting on walls, posts, columns or machines. Wt. 6 lbs.

UNIT No. 3J—(not illustrated)—Canister alone with mounting bracket.

WRITE FOR ILLUSTRATED FOLDERS

STANDARD INDUSTRIAL PRODUCTS CO.

DEPT. S • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

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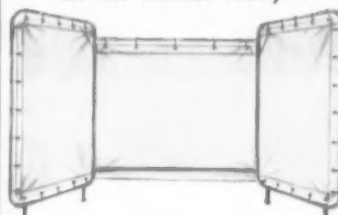
throughout the United States and Canada.

In considering the problem of industrial vegetation control, manufacturers have developed formulations that are nonselective in herbicidal action, long lasting when applied to the soil, nontoxic to plant personnel and animals, noncorrosive to ferrous and other metals used in plant installations, and low in cost. Of real importance to the plant manager is the fact that they can be applied by regular gardeners or maintenance men—eliminating the necessity for expensive equipment and outside contractors. One of the most efficient of these new materials is Ureabor, which has been on the market for about two years.

Ureabor is a specially compounded formulation of substituted urea and sodium borates. Each of these materials has been used for many years in nonselective elimination of vegetation by large industries, such as railroads, petroleum installations, and electric and power communication systems. Each of the two mate-

PORTABLE SINGER SCREEN

*The only screen of its kind
on the market today!*



- ★Light Weight
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- AT LAST—a portable screen that is a fraction of the weight of the old type. Will stand plenty of rough handling. Available in every wanted size.

Ask your dealer or write to us for folder and prices.

ALSO—WELDING GLOVES and SAFETY CLOTHING—WE OFFER A COMPLETE LINE

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Special Products Division

**SINGER
GLOVE MFG. CO.**

860 W. WEED ST.

CHICAGO 22

"Work Gloves That Sing"

Circle Item No. 37—Reader Service Card

National Safety News, July, 1957

rials in this combination has been proved relatively nontoxic to warm blooded animals, to have long residual action when applied to the soil, to be non-fire hazardous, and noncorrosive to a wide range of materials in industrial plant installations. Each of the materials was known to be somewhat selective in controlling certain types of vegetation—the combination of the two will cover the range of vegetation normally found on plant installations.

These individually effective herbicidal compounds were combined to produce a granular, dust-free formulation that is applied dry to the soil and requires only normal rainfall to activate it. This adaptation eliminates the necessity for high-priced, cumbersome spraying equipment and eliminates the hazards of spray drift to buildings, parked cars, or other installations. This weed killer combination can be applied to small areas by hand without hazard to the applicator.

On medium-sized areas or where access is limited—such as in parking lots, along chain link fences, or around material store yards or petroleum installations—a small hand-operated sling strap spreader of 25 lbs. capacity has been developed. This equipment, which retails at under \$15 per unit, permits one man to treat as much area in a given time as was formerly possible with an expensive truck-mounted spray unit with two to three operators. This small commercial spreader plus Ureabor has in the past two years become standard maintenance equipment with many large industrial plants.

For larger areas with established access—such as railroad sidings, certain pipeline installations, and along drainage ditches or roadways—a small one-man spreader of greater capacity powered with a lawn mower-type motor has been designed for applying this new granular weed killer. It is also light in weight and can be easily loaded into the back of a pick-up truck or onto a push car on a railroad siding where it will give uniform but controlled application of the granular material at a rate equal to

Circle Item No. 38—Reader Service Card



Falcon[®]

"Sounds for Safety"

	<p>AUTOMATIC HIGH-LEVEL alarm prevents costly, dangerous overfilling of petroleum, chemical, water, other liquids in fixed- and floating top, indoor and outdoor, mixing, storage tanks. Safe, reliable gas-powered horn audible for one-half mile and more.</p>
	<p>MANUALLY-OPERATED, gas-powered signaling horns ideal for emergency and 1,001 other uses. Self-contained units are highly portable, entirely reliable. Non-electric operation permits use in hazardous vapor areas. Small units feature disposable Freon cans.</p>
	<p>NEW AUTOMATIC fire detecting systems and units give early warning in case of fire. Heat activates any single Freon-powered detector in system, instantly sounds horn. Ideal for homes, institutions, commercial, industrial buildings. U/L approved, low cost.</p>

DEALER TERRITORIES OPEN
Falcon Alarm Co., Inc.
 243 Broad St., Summit, New Jersey



CARBON MET

A HALOGENATED AROMATIC HYDROCARBON

A specific cleaning replacement for CARBON TETRACHLORIDE

Out and out metal dry cleaning solvent and degreaser for all types of electric motors, instruments, electronic equipment. Ready to use "Handy Kit," containing Patented dip and drier basket.

A LOWER TOXICITY SOLVENT.

- Quick Cutting solvent against stubborn dirt and grease.
- Non-Explosive... Safe... Comfortable to work with.
- Non-Corrosive to metals. Fast, clean evaporation.
- Non-Ionic... Hi-Dielectric... a specific for cleaning electrical components.

Much faster cutting than "Carbon Tet" . . . Causes no rusting . . . Leaves no film.

also in economical 55 gal. size drum



U. S. PAT. 2318942

IMMEDIATE DELIVERY

1 PINT OR A TANK CAR



GUNK CHICAGO CO.

CURRAN CORP.

Mfg. Chemicals

LAWRENCE, MASS.

CHICAGO 38

Circle Item No. 39—Reader Service Card

**MEET EMERGENCIES
FASTER, BETTER WITH
HAGGARD'S STRETCHER**



SETS UP IN SECONDS so that the patient can be placed on it immediately. When folded, Haggard's Stretcher needs a space of only 24" x 50" x 6". Can be mounted on wall or carried in any vehicle.



QUICK IMMOBILIZATION of arms and legs is accomplished through use of well-placed bandage and strap openings in Haggard's Stretcher. Lower section divided for ease of immobilizing legs.



X-RAY WITHOUT MOVING injured person. Patient can be X-rayed or fluoroscoped directly on the stretcher... no distortion, no interference by materials. Eliminates possibility of further shock by undue handling.

Ask your MSCO distributor for a demonstration of Haggard's Stretcher, an MSCO exclusive, or write direct.



*Specialists in
first aid*

Medical Supply Company
Rockford, Ill. • In Canada, It's Safety Supply Co.

Circle Item No. 40—Reader Service Card

the old type spray train or large truck-mounted spray units.

A number of commercial and industrial plant users indicate that the cost of materials for controlling all vegetation on a 3 ft. strip along chain link fences is less than \$75 per mile for material and labor, with one man treating up to several miles per day. Cost of vegetation control for a full year in parking lot and storage areas can be accomplished for as little as 30 cents per 100 sq. ft.—and without additional labor expenditures other than those for standard permanent maintenance crews.

With new materials and equipment, vegetation control has become an incidental item in plant maintenance instead of a major item of labor and expense. Further, the problem is limited to a brief period of attention to application of these materials in early spring before vegetation starts a rapid growth—then is forgotten for the remainder of the season.

Your Guides

—From page 54

representative cross sections of all interested groups.

More than 180 separate standards have been developed by committees of the organization. Standards are periodically revised by the committees to keep in step with progress in science and industry. The standards, after adoption by the association, are widely used as a guide to good practice, as the basis of state and municipal legislation, and for insurance requirements. Individual standards are available in pamphlet form and groups of them have been published by the NFPA in six volumes of national fire codes as follows:

- Vol. 1. Flammable Liquids, Gases, Chemicals and Explosives.
- Vol. 2. Prevention of Dust Explosions.
- Vol. 3. Building Construction and Equipment.
- Vol. 4. Extinguishing and Alarm Equipment.
- Vol. 5. National Electrical Code.
- Vol. 6. Transportation.

The standard reference work in the field has long been the *NFPA Handbook of Fire Protection*

New **ACME**

Full Vision

"SPEC" MASK



At Last...

GAS MASK PROTECTION For Eye-Glass Wearers

If you wear eye glasses, you no longer have to put up with the hazard of ill-fitting gas masks worn over your regular spectacles. This exclusive new Acme "Spec" mask now gives you a facepiece with all the proved Acme safety features PLUS built-in eye glasses ground to your individual prescription.

You can get the Acme "Spec" mask complete with personal lenses by sending your doctor's prescription with your order. Or, if you prefer, the mask can be furnished with stirrup, bracket and front ready for your doctor to mount your proper lenses.

Either way, you get the perfect vision, safety and comfort along with the Acme advantage of one facepiece serving multiple uses.

For details on this timely Acme development, write for Bulletins No. 576 and No. 576-A (Prescription Form).

FREE PROTECTION GUIDE

Lists 433 hazardous gases, mists, fumes, and dusts... along with Acme protection recommended to overcome them. Write for Bulletin 542.

ACME PROTECTION EQUIPMENT CO.

1209 Kalamazoo St.
South Haven, Michigan

Circle Item No. 41—Reader Service Card
National Safety News, July, 1957

THE BEST TIME TO STOP A FIRE IS BEFORE IT STARTS

WRITE FOR LATEST CATALOG SHOWING SAFETY SIGNS FOR ALL PURPOSES

STANDARD SIGNS, INC.
3190 E. 65TH ST. • CLEVELAND 4, OHIO

IF YOU USE THESE PRODUCTS...

send for
the world's most
complete, illustrated
catalog of
**ELECTRIC
LANTERNS
and
SAFETY
CANS**

VALUABLE DATA:

The world's first comprehensive table
of lamp and battery operating
information
High power searchlights
All-purpose hand lights
Safety lights and lanterns
Flammable liquid SAFETY CANS
Oily Waste Cans

JUSTRITE Mfg. Co.

2061 N. Southport, Chicago, Ill.

CATALOG NUMBER 569 M7

(Crosby-Fiske-Forster), now in its 11th edition. This handy volume of slightly more than 1,500 pages contains the essential basic information on fire protection in convenient form.

The National Board of Fire Underwriters, New York, is an engineering, statistical and educational organization maintained by stock fire insurance companies. The work of the organization is supported by its membership which comprises nearly all of the important companies of this type. The Board, originally organized for service to its membership, has become practically a public service institution.

One of the important contributions of the NBFU is the *National Building Code* which has been an important influence in improving building construction. The Committee on construction of buildings, through advice and criticism of proposed ordinances, assists municipalities in the preparation of satisfactory building regulations.

The Board has published numerous pamphlets for the general public and for use and information of employees and agents. It also circulates educational and informational films.

Underwriters' Laboratories has published in addition to its lists of approved equipment, numerous standards on various fire protection and accident prevention subjects.

Factory Mutual's Engineering Division also publishes an extensive list of pamphlets covering a wide range of fire protection topics.

More specialized research in fire protection is conducted by National Bureau of Standards, U. S. Bureau of Mines and U. S. Department of Agriculture.

Slogan for motorists: "Drive carefully, so that your license expires before you do."

A woman makes up her mind and her face several times a day—and is seldom satisfied with the results of either.

SYNONYMOUS WITH SAFETY

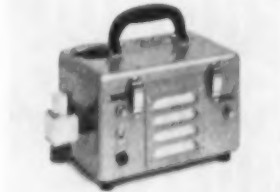


**COMBUSTIBLE
GAS
INDICATORS
AND ALARMS**

For testing selected danger areas, J-W portable instruments give dependable, troublefree service at low cost.



J-W Model G Portable Indicator—for easy spot checking of confined and inaccessible spaces. Battery-operated. Soft aspirator bulb allows almost effortless sample drawing. Weighs slightly over 4 lbs. Automatically switches on and off with appropriate movement of aspirator bulb.



J-W Sentinel Portable, Audible Alarm—for continuous "watchdog" protection around any hazardous activity, indoors and out.

Indicates quantity of combustible gas build-up and loudly warns of dangerous concentration around such operations as welding and electrical repair, and when cleaning and repairing tanks and lines. Ruggedly built for versatile service.



For detailed data on these models and J-W instruments for fixed installation, contact the makers of top quality products for over 25 years:

JOHNSON-WILLIAMS, INC.

Palo Alto 9, California

Canadian customers, please write:

SAFETY SUPPLY CO.
Toronto, Ontario

Circle Item No. 44—Reader Service Card



For Emergencies...

PORTABLE OXYGEN and RESUSCITATION UNIT

Preparedness for emergency may save a life when breathing is stopped or impaired. This unit is safe, efficient, and easy to use. It provides manual positive pressure resuscitation with a safety valve that limits pressure to 20 mm. Hg.

The complete unit weighs only 21 pounds when full cylinder is included, and it measures 5½" x 10¼" x 23½". Instructions are permanently affixed to the cover of the attractive green case.

Uses standard size "D" oxygen cylinders, available throughout the United States. Check under "Oxygen" in yellow pages of telephone book for local source of supply.

Order units directly from Ohio Chemical & Surgical Equipment Co., Madison 10, Wisconsin, from 29 branch offices or from the 400 Airco welding dealers handling this unit. For descriptive leaflet 4712 write Dept. NSN.

COMPLETE UNIT (less cylinder and contents) \$70

F. O. B. Madison, Wis. — in Continental U. S. A.



Ohio Chemical

OHIO CHEMICAL & SURGICAL EQUIPMENT CO.
MADISON 10, WISCONSIN

Ohio Chemical Pacific Company, Berkeley 10, Calif.
Ohio Chemical Canada Limited, Toronto 2, Ontario
Airco Company International, New York 17, N. Y.
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(All subsidiaries or divisions of
Air Reduction Company, Incorporated).

FIRE CONTROL PRODUCTS

Skillfully fabricated

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SHIELDS CURTAINS BLANKETS GARMENTS

by

*TO isolate -
retard -
confine -*

FIRES!

**IN SIZES AND STYLES TO FIT YOUR NEEDS -
- BY CRAFTSMEN WHO KNOW YOUR NEEDS!**

SPECIFIC INFORMATION AND
TEST SAMPLES ON REQUEST.



Industries

FABRICATORS OF APPROVED SAFETY PRODUCTS
BOX 419 • DUBUQUE • IOWA

Circle Item No. 46—Reader Service Card

Sprinklers on Guard

—From page 44

Water is released in most sprinklers by a fusing of a soldered link element. Another type uses a quartz bulb containing liquid that expands when heated and bursts a bulb. A third type uses a low-fusing chemical that liquefies at the rated temperature and allows a strut to collapse.

During 1952 and 1953, sprinklers—particularly the defectors—were redesigned so as to give greatly improved water distribution. As a result of these changes the water is discharged in all directions below the plane of the deflector. The spray pattern is roughly that of a half sphere completely filled with water spray. Little or no water is discharged upward to wet the ceiling. The distribution at any level below the sprinkler is more uniform than from the old type sprinklers and covers a circular diameter of about 16 feet when discharging 15 gallons per minute. The area covered is greater at distances over four feet and is less with a lesser clearance.

There are four types of sprinkler systems in use: the wet pipe system, the dry pipe system, the pre-action system, and the deluge system.

Wet Pipe. In the wet pipe system, all the piping is filled up to the sprinkler heads with water under pressure. When heat melts the fusible element in a sprinkler head, water is sprayed over the area below. This type can be used only where the building containing the entire system is heated.

Dry Pipe. In the dry pipe system, the piping contains air under pressure down to a dry pipe valve. Release of the air pressure, caused by the melting of the fusible element of the sprinkler head, opens the dry pipe valve, and the water flows to the sprinklers. This type of system is used in unheated areas, but the dry pipe valve is located in a heated room or chamber.

Pre-action. In the pre-action system, the piping contains air which may or may not be under

pressure. Water supply is controlled by an automatic valve operated by means of heat-actuated devices independent of the sprinkler system. The heat-responsive devices are located in the same areas as the sprinklers, and the valve opens before the fusible elements open the sprinkler heads.

Usually an alarm is sounded when the valve opens and begins to fill the system with water. There may then be time to put out the fire with portable equipment before the sprinklers go into action and drench the area with water. This system is especially effective where valuable merchandise is handled or stored.

It is often more effective than the dry pipe system, as the heat-actuated valve, when opened, fills the entire system with water, ready for use when the sprinkler heads open. There is some lag in the dry pipe system after the heads open and before the piping fills with water.

Deluge. In the deluge system, either all or some of the sprinkler heads are open at all times. Valves controlling the water supply to the system may be operated automatically or manually. If automatically controlled, they are usually activated by heat-responsive devices. This type of system is primarily designed for high hazard occupancies where great quantities of water may have to be applied over large areas as quickly as possible.

Open. An open system of outside sprinklers is occasionally used for distributing water over the roof or exterior of a building to protect it against fire from adjoining property. This type is usually manually operated and is confined to high hazard occupancies or substandard construction inadequately protected by design or by distance from the combustible material and buildings.

Sprinkler Supervision

Automatic alarm apparatus operated by the flow of water through the system, by the rate of temperature rise, or by other automatic means may be a part of standard sprinkler installation. Such an

alarm gives prompt notice that the sprinkler system is operating and also signals water leakage or discharge from causes other than fire.

Water leakage does not present a great problem. The records of the Factory Mutual Fire Insurance Companies report that only one automatic sprinkler head in 3,325,000 a year opened due to mechanical defect. This truly remarkable record shows how unfounded is the fear, sometimes expressed, that automatic sprinklers may open accidentally and

cause water damage.

Although the maintenance on sprinkler heads is relatively light, nevertheless they are a mechanical device which is subject to depreciation and obsolescence and should be given close supervision.

According to the Factory Insurance Association, representative samples of the following sprinklers should be removed periodically and submitted to recognized fire testing laboratories.

— Heads that have been in service 25 years or more.

Circle Item No. 47—Reader Service Card

Why INDUSTRY IS BUYING THE NEW EAGLE Safety Cans

the approved SAFE way to handle flammable liquids



1 qt., 2 qt., 1 gal. Safety Cans come with trigger-grip handle, as illustrated at top right. 2½ and 5 gal. sizes feature free-swing handle (above)

- A complete new line with a good old name
- Listed by Underwriters Laboratories
- Approved by Factory Mutual
- Available in 5 sizes from 1 qt. to 5 gal.
- No waste, no splash, no spill
- Strong quality construction
- Self-adjusting guard cap prevents leakage
- Safe for handling all flammable liquids

Order from your supplier or write for information. The new Eagle catalog showing the Complete Line is now available free. Eagle products are also available in Canada.



MANUFACTURING COMPANY
Wellsburg, W.Va.

Serving Industry Since 1894

MANY HUNDRED INDUSTRIAL Manufacturers Use This ALL PURPOSE PROTECTION

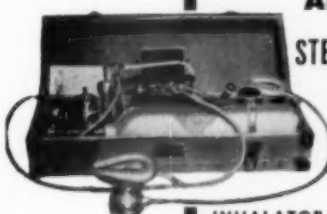
for respiratory emergencies

STEPHENSON "MINUTEMAN" RESUSCITATOR

Especially designed in weight and size, for quick, easy application in cases of fume suffocation, gas poisoning, heart attacks, etc.

NO INDUSTRIAL PLANT SHOULD BE WITHOUT THIS PROTECTION

Write for FREE demonstration or pamphlet N-307.



INHALATOR
ASPIRATOR
RESUSCITATOR

(weights only 30 pounds)



Circle Item No. 48—Reader Service Card



NOBODY
wants to
SET the
WORLD
ON FIRE
(much less — his plant!)
you can STOP
FIRES before
they start

with
FIRE
PREVENTION
SIGNS
for SAFETY

Ready Made
in METAL
PLASTICS
and the new
NEW
self-adhering
READI-STIK

FIRE EXIT

—NO—
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HAZARD
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SAFE
TO USE ON
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PERMITTED IN
THIS AREA ONLY

Man's best friend becomes his worst enemy!
FIRE... out of control... in your plant or
premises... can wipe out a lifetime of work,
investment and dreams (and life and limb
too!)... in a matter of minutes!

The time to STOP FIRES is before they
start... with clear, concise, durable
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Name _____ Title _____

Address _____

City _____ Zone _____ State _____

Circle Item No. 49—Reader Service Card

—Heads in systems that are being
rehabilitated after a period of dis-
use, especially if system has been
subject to freezing.

—Heads that may be considered
doubtful due to occupancy such as
in foundries, tanneries, packing
plants, plating plants, or in the im-
mediate vicinity of salt water.

The following sprinklers should
be replaced without testing:

—Heads that have in any manner
been subject to mechanical injury.

—Heads that are perceptibly corroded
or loaded with foreign materials.

—Heads that show signs of leaking.

—Heads that have been painted —
not merely spattered. Cleaning of
sprinklers is not recommended.

—Heads that have been cleaned of
paint or similar coating.

—Heads that have been subject to
heat within 50 degrees F. of their
operating temperature for long pe-
riods of time.

—Heads that have been in service
more than 50 years.

Overheating is the principal
cause for accidental sprinkler op-
eration, accounting for over a
fourth of the cases. Mechanical
damage is the next most impor-
tant cause. The leading cause of
such damage: the careless opera-
tion of lift trucks.

Special Systems

For special risks, automatic sys-
tems employing carbon dioxide,
foam or water spray nozzles may
be installed.

Carbon dioxide is particularly
desirable where the system oper-
ates in an enclosed space and the
value of the contents is high and
subject to water damage. Carbon
dioxide can be discharged either
manually or automatically by
means of heat-actuated devices.

Devices are also provided for
closing shutters, doors, windows
and dampers and stopping blowers
to confine the extinguishing gas.
These systems are suitable for
spaces containing electric equip-
ment or flammable liquids.

Foam installations are suitable
for tanks and operations involving
flammable liquids but not for elec-
tric fires. They are usually ar-
ranged to operate automatically
with provision for manual opera-
tion.

(—To page 135)

ANNOUNCING THE NEW FIRE KING WITH AIR-PAK

by *Wheeler*

WHEELER
FIRE KING
No. 47814

Design patented
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registered



*Helps you avoid the most disastrous consequences of fire

The new Wheeler FIRE KING! Far
superior to any other rescue equipment,
the FIRE KING utilizes light alumin-
ized asbestos for maximum heat reflec-
tion and mobility. The efficient Scott
Air Pak breathing unit, provides cool
air (not oxygen) on demand. The FIRE
KING is ready for use in seconds... is
easy to use... and fits all average size
men (5'8" to 6'2"). Cylinder capacity
provides for 15 minutes constant work
inside the suit — at extreme exertion.
Bullard hard hat built-in for added
protection.

And the cost? Well within the budget
of any fire services or institutions. Don't
be without this valuable form of fire
insurance for another day. Order from
your jobber or write direct. DO IT
NOW!

*6,300 human lives lost through fire
in 1954 — countless horses and live-
stock — millions in property.

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226 West Huron Street
Chicago 10, Illinois



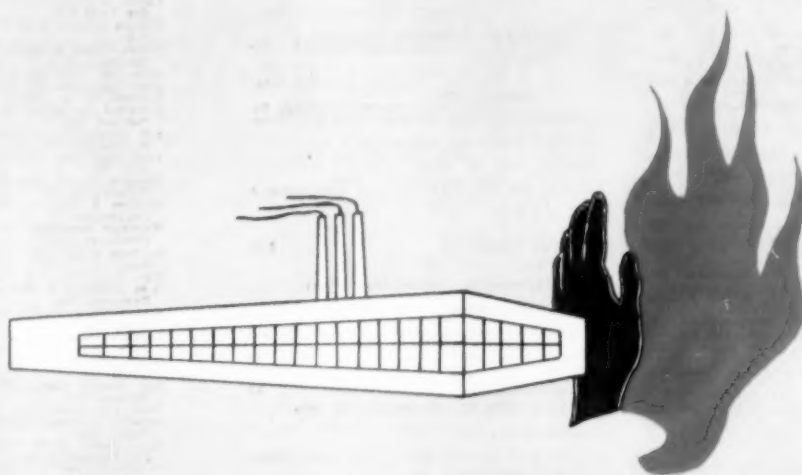
"More Safety Per Dollar"

Circle Item No. 50—Reader Service Card

National Safety News, July, 1957

Sources and types of...

Fire Protection and Control Equipment



Directory of Fire Protection and Control Equipment Sources, Pages 68 to 78
Classified Index of Fire Protection and Control Products, Pages 79 to 81

The information in these directories has been prepared to help you in the selection of fire protection products. In many cases, the distributors and branch offices of the companies listed in the Fire Control Products Index may be found in the Directory of Fire Protection Equipment Sources. In the Sources Directory, reference is made to the advertising page number if the organization has an advertisement in this issue.

directory of fire protection and control equipment sources

—A—

Acme Protection Equipment Co. 62
1209 Kalamazoo, South Haven, Mich.

DISTRIBUTORS:

Harless, L. P., Co. Ltd., 2627 Seventh Ave. S., Birmingham, Ala.
Fire Appliance & Safety Co., 1114 W. Markham, Little Rock, Ark.
Brenton Equipment Co., 374 Brannan St., San Francisco, Calif.
Guardian Safety Equipment Co., 7228 S. Main St., Los Angeles, Calif.
Guardian Safety Equipment Co., 427½ Moreland Ave., Atlanta, Ga.
Universal Safety Equipment Co., 5115 W. Diversey Ave., Chicago, Ill.
Standard Industrial Products Company, 920 N. Garfield Ave., Peoria, Ill.
Williams & Co. Inc., 1109 S. Preston St., Lexington, Ky.
General Equipment Corp., 261 Franklin St., Boston, Mass.
Averill Equipment Co., 19225 Conant Ave., Detroit, Mich.
Continental Safety Equipment Inc., 1551 Selby Ave., St. Paul, Minn.
Safety Incorporated, 17½ E. 31st St., Kansas City, Mo.
Safety Incorporated, 2608 Olive St., St. Louis, Mo.
Big Horn Supply Co. Inc., P.O. Box 1493, Billings, Montana
Guardian Safety Equipment Co., 408 S. Jefferson St., Orange, N.J.
New Jersey Safety Equipment Co., 299 Park Ave., East Orange, N.J.
The Watson Co., 1415 E. Main St., Buffalo, N.Y.
Acme Safety Products Co., 387 Rorer Ave., Akron, O.
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Universal Safety & Fire Equipment Inc., 727 S.W. Temple, Salt Lake City, Utah
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Spokane Safety Appliance Co., N. 219 Division St., Spokane, Wash.
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Fleck Bros. Ltd., 110 Alexander St., Vancouver, B.C., Can.
Gaspro Ltd., P.O. Box 2454, Honolulu, T.H.
Equipos de Seguridad, S.A. Sullivan No. 95, Mexico, D.F., Mex.

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Advance Glove Mfg. Co.
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516 E. Pike St., Seattle, Wash.
920 W. Second Ave., Spokane, Wash.
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Safety Div.

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Southwest Equipment & Extinguisher Co., 526 Palm Drive, Corpus Christi, Tex.
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Safety Supply Co., 214 King St., E. Toronto, Ont., Canada
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Automatic Sprinkler Corp. of America

Box 360, Youngstown 1, Ohio

-B-

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Elliott, J. H. Co., The, 2101 New York Ave., N.E. Washington, D.C.
Aero Hardware & Supply Co., 4301 N.W. 36th St., Miami Springs, Fla.
Tull, J. M. Metal & Supply Co., Inc., 285 Marietta St., N.W., Atlanta, Ga.
Universal Safety Equipment Co., 5115 Diversey Ave., Chicago, Ill.
Samuel Harris & Company, 114-116 N. Clinton St., Chicago, Ill.
Safety Corporation, The, 3749 E. Michigan St., Indianapolis, Ind.
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Oliver H. Van Horn Co., Inc., 1200 Neosho St., Baton Rouge, La.
Oliver H. Van Horn Co., Inc., 1742 St. Charles Ave., New Orleans, La.
Harris Frederic & Co., Inc., 100 Edwards St., Shreveport, La.
General Equipment Corporation, 261 Franklin St., Boston, Mass.
Streitinger, Chas. A. Co., The, 149 E. Larned St., Detroit, Mich.
Granden-Hall & Co., Walnut & Poplar Sts., Flint, Mich.
Confidential Safety Equipment Co., Inc., 1551 Selby Ave., St. Paul, Minn.
Forlund Pump & Machinery Corp., 1717 Main St., Kansas City, Mo.
Safety, Inc., 2601 Carey St., St. Louis, Mo.
MacDonald, R. F. Co., 3829 W. Pine Blvd., St. Louis, Mo.
Antrim Hardware Co., 1514 Federal St., Camden, N.J.
Heiler, J. & Sons, 149 Ferry St., Newark, N.J.
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Union Supply Co., Carlsbad, N.M.
Clowe & Cowan, Inc., Roswell, N.M.
Sager-Spuck Supply Co., Inc., 360 Broadway, Albany, N.Y.
Elwood Corporation, The, 2180 Elmwood Ave., Buffalo, N.Y.
Durkee Co., Inc., The, 29 South St., New York City, N.Y.

Harold Dessau, Inc., 25 Murray St., New York City, N.Y.
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Chapin-Owen Co., Inc., 205 St. Paul St., Rochester, N.Y.
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Clement Safety Equipment, Inc., 720 S. Third St., Memphis, Tenn.
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Universal Safety Equipment Co., Inc., 3155 S. Seventh St., Milwaukee, Wis.
Vehes, C. N. Ltd., Rittsburg, Ont., Can.
Pascall, J. Hardware Co., Ltd., 401 Craig St., W. Montreal, Quebec, Can.
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Mine Safety Appliances Co. of Canada, Ltd., 500 McPherson Ave., Toronto, Ont., Can.
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Zink Safety Equipment Co., 709 W. 12th St., Kansas City, Mo.
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Guardian Safety Equip. Co., 3615 Capital Heights Ave., Baton Rouge, La.
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Carm Machinery & Supply Co., P.O. Box 206, Baltimore, Md.
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Palmer & Kline, Govt. Sales Office, P.O. Box 9294, Rosslyn Sta., Arlington, Va.
Safety & Supply Co., 115 Blanchard St., Seattle, Wash.
Spokane Safety Appliance Co., N. 219 Division, Spokane, Wash.
Safety First Supply Co., 1594 Jackson St., Charleston, W. Va.

Safety First Supply Co., 47 Garland Ave., Wheeling, W. Va.
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Skanska Attribfabriken A.B., Perstorp, Sweden
A. Bovey S.A., 43 Rue Cesar Roux, Lausanne, Switzerland
Venezuela Supply C. A., Apartado 1871, Caracas, Venezuela

-C-

Cordox Corp. 36
307 N. Michigan Ave., Chicago 1, Ill.

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Fire Equipment Sales Co., 6 Winspear Ave., Buffalo, N.Y.
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Thomas, W. J., Wheeling Steel Bldg., Wheeling, W. Va.

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Chicago Watchclock Co. 34
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60 E. 42nd St., New York, N.Y.

Coppus Engineering Corp. 40
127 Park Ave., Worcester 2, Mass.

C-O-Two-Pyrene Div. 51
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Meyers, Kenneth W., One So. Northwest Highway, Park Ridge, Ill.
Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis, Ind.
Sturgeon, P. R., Inc., 25 Huntington Ave., Boston, Mass.
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Engineering Services Co., 6635 Delmar Blvd., St. Louis, Mo.
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Malta, Victor B., Company, 1135 Shoem St., Philadelphia, Pa.
MacGuire Instrument Co., 4010 Kilbourne Rd., Columbia, S.C.
Western Dynamics Co., 444 Dexter Horton Bldg., Seattle, Wash.

Custanite Corp.
1228 Utica Ave., Brooklyn 3, N. Y.

Cycle-Flo Co.
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-D-

Davenport, A. C., & Son, Inc. 138
311 N. Desplaines St., Chicago 6, Ill.

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c/o Howard Threadgill, 423 Stallings, Birmingham, Ala.
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Davis Emergency Equip. Co., Inc.
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Lax, Peter E., Co., 13945 Lake Ave., Cleveland, Ohio
Davidson, W. H., Co., P.O. Box 351, Wayne, Pa.
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74 Park Ave., Rochester, N. Y.
218 Harrison St., Syracuse, N. Y.
106 N. Caldwell St., Charlotte, N.C.
307 E. 4th St., Rm. 426, Cincinnati, Ohio
1014 Engineers Bldg., Cleveland, Ohio
1224 S.W. Marion St., Portland, Ore.
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P.O. Box 133, Murray Branch, Salt Lake City, Utah
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P.O. Box 1562, Charleston, W. Va.
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Foglio, P. P., & Eliason, J. E., 30 Rockefeller Plaza, New York, N.Y.
Bedard, Earl L., 14057 Madison Ave., Cleveland, Ohio
Lovendahl, Arne, 6312 Chew Ave., Phila., Pa.
Fee, James F., 4816 Milam St., Houston, Tex.
Electronics Corp., 520 America (Canada) Limited, 98 Advance Rd., Box 111, Islington, Toronto, Ontario, Canada
Weidon, Thos. F., Director of European Sales, AM Hauptbahnhof 19, Frankfurt/Main, Germany

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Valente, A. S., 63 Harbor Lane, Massachusetts Park, N.Y.
Kidd, James E., 629 Spruce Lane, Villanova, Pa.
Berne, W. E., P.O. Box 5245, Columbia, S.C.
Curtis, L. N., & Sons, 432 W. Third St., Salt Lake City, Utah
Curtis, L. N., & Sons, 1294 Westlake Ave. No., Seattle, Wash.
Ingram & Bell, Ltd., 256 McEul St., Toronto, Ont., Canada

Excel Electric Service Co.

2121 S. Western Ave., Chicago 8, Ill.

—F—

Falcon Alarm Co., Inc. 61

243 Broad St., Summit, N. J.

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Tech Supply Co., 52 S. Hawk St., Albany, N.Y.
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de Schaeck, Paul, 225 E. 74th St., New York, N.Y.
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Harnan, Jay L., Fire Equip. Co., 307 San Francisco, El Paso, Tex.
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Northwestern Distributing Co., 2331 Rosemont Pl., Seattle, Wash.
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Frank Mfg. Co., Inc.

Box 68, Mentone, Indiana

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Medley & Bath Sts., Philadelphia 37, Pa.

Fremmel Industries

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Turilo, Fred, P.O. Box 43, Aiglen, Pa.

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 HeQua Elect. Supply Co., Inc., 91-93 St. Paul St., Rochester, N.Y.
 Baldwin-Hall Co., 475 Oswego Blvd., Syracuse, N.Y.
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 Midland Electric Supply, 3125 Superior Ave., Cleveland, Ohio
 SREPCO, Inc., 216 Leo St., Dayton, Ohio
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 Erie Industrial Elec. Supply Corp., 1502 Cherry St., Erie, Pa.
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 Reflective Products Div.
 900 Bush St., St. Paul 6, Minn.

Monsanto Chemical Co. 45
 800 N. 12th St., St. Louis 1, Mo.

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 2417 Commerce, Dallas, Texas

National Foam System, Inc. 41
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 141 E. 46th St., New York, N.Y.
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Polix, J. D., Mfg. Co.
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Powhatan Brass & Iron Works
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Prairie State Products Co. 142
 3822 Lawrence Ave., Chicago 25, Ill.

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 1920 S. Western Ave., Chicago 8, Ill.

Pulmoner Safety Equipment Corp. . . 144-145
 644 Pacific St., Brooklyn 17, N. Y.

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 Guardian Safety Equip. Co., 1915 Westheimer, Houston, Tex.
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 Industrial Safety Supply Co., 3518 MacCorkie Ave., S.E., Charleston, W. Va.
 Protective Equip. Inc., 2091 W. Capitol Dr., Milwaukee, Wis.
 Universal Safety Equip. Co., 3155 No. 7th, Milwaukee, Wis.

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Safety Clothing & Equipment Co. 1990 E. 69th St., Cleveland 3, Ohio

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 175 Saw Mill River Rd., Elmsford, N. Y.

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 Safety First Supply Co., 3903 Shanabrook N.W., Canton, Ohio
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 Safety First Supply Co., 838 W. Delaware Ave., Toledo, Ohio
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 Safety First Supply Co., 425 Magee St., Pittsburgh, Pa.
 Guardian Safety Equip. Co., 1915 Westheimer, Houston, Tex.
 Spokane Safety Appliances Co., N. 219 Division St., Spokane, Wash.
 Safety First Supply Co., 1594 Jackson St., Charleston, W. Va.
 Pagel Safety Products, 4611 W. National Ave., Milwaukee, Wis.
 Levitt Safety Ltd., 747 Vaughan Rd., Toronto, Ontario, Can.

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 Safety Equip. & Supply Co., 1724 W. Main St., Fort Wayne, Ind.
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 Pagel Safety Prod., Inc., 4611 W. National Ave., Milwaukee, Wis.
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 Dickson Safety Equip. Co., 12921 W. Washington Blvd., Los Angeles, Calif.
 Bullitt Machinery Co., 475 4th St., San Francisco, Calif.
 Bullard, E. D., & Co., 275 Eighth St., San Francisco, Calif.
 Smith-Keefer & Co., College Hwy., Avon, Conn.
 Direct Sales Co., 79 N. Main St., Waterbury, Conn.
 Lee, Harry P., Inc., 100 W. Livingston Ave., Orlando, Fla.
 Universal Safety Equip. Co., 5115 W. Diversey Ave., Chicago, Ill.
 Martin, W. L., & Co., 234 S. Michigan Ave., Chicago, Ill.
 Standard Industrial Products Co., 116 S. Garfield Ave., Peoria, Ill.
 Cain Safety Service, 1318 Hoyt Ave., Indianapolis, Ind.
 Iowa Safety Equip. Co., 414-416 12th St., Des Moines, Iowa
 Louisville Mill Supply Co., 15th & Madison Sts., Louisville, Ky.
 Boyer-Campbell Co., The, 6540 St. Antoine St., Detroit, Mich.
 Safety Services, Inc., 1903 W. Main St., Kalamazoo, Mich.
 Continental Safety Equip., Inc., 1551 Selby Ave., St. Paul, Minn.
 Sales Service Machine Tool Company, 2363 University Ave., St. Paul, Minn.
 Notte, E. H., Safety Appt., 308 Main St., E. Orange, N.J.
 Sanctuary, Harry L., 22 E. Bridge St., P.O. Box 1218, Poughkeepsie, N.Y.
 Euramco Export Corp., 900 6th Ave., New York, N.Y. (Export)
 Rochester Safety Equip. Co., 88 Howell St., Rochester, N.Y.
 Safety Clothing & Equip. Co., 1990 E. 69th St., Cleveland, Ohio
 Reolan Supply Co., 2327-2339 Gilbert Ave., Cincinnati, Ohio
 Acme Safety Products Co., 1823 Vermont St., Toledo, Ohio
 Technical Safety Prod. Co., 315 Sherbrook Blvd., Upper Darby, Pa.
 Star Machinery Co., 251 Lauder St., Seattle, Wash.
 Universal Safety Equip. Co., 3155 S. 7th St., Milwaukee, Wis.
 Safety Supply Co., 214 King St., E., Toronto, Ont., Can.
 Dominion Power Press Equip. Ltd., Graham's Lane, Burlington, Ont., Can.

Please mention National Safety News when contacting any of these organizations.

Seco Engineering & Mfg., Inc.

Div. Seco Safety Products Co.
1300 W. Fort St., Detroit 36, Mich.

BRANCH OFFICES:

217 Lake Michigan Dr., Grand Rapids, Mich.
619 Grand Traverse Ave., Flint, Mich.

DISTRIBUTORS:

Mosler Engineering & Sales Co., 4333 W.
Peterson, Chicago, Ill.
Fesco Fire Equip. Co., 906 E. 18th St., Louis-
ville, Ky.
Rosenat & Co., 11111 Bldg., New Orleans, La.
Materials Handling & Equip. Corp., 8075 Man-
chester Ave., St. Louis, Mo.
Nook & O'Neill Co., 2074 E. 65th St., Cleveland,
Ohio
Fyr-Fryer Products Co., 409 Warren St., Dayton,
Ohio
Campbell, J. L., Co., 8117 Germantown Ave.,
Philadelphia, Pa.
Sterling & Newby, 4481 Maple Ave., Dallas,
Tex.
Equip. Sales Co., P.O. Box 9117, Richmond, Va.

Shell Oil Co. 49
50 W. 30th St., New York, N. Y.

Singer Glove Mfg. Co. 40
860 W. Weed St., Chicago 23, Ill.

Smith, D. B. & Co., Inc.
414 Main St., Utica 2, N. Y.

Snyder, M. L. & Son, Inc.
2436 N. Jasper St., Philadelphia 25, Pa.

Spartan-Paradise, Inc.
1322 E. Church St., Adrian, Mich.

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1745 "K" St., N.W., Washington, D.C.
9 S. Clinton St., Chicago, Ill.
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N.Y.
1414 Dime Bldg., Detroit, Mich.
2084 Locust, St. Louis, Mo.
734 Wakefield Dr., Cincinnati, Ohio
Bessmer Bldg., 164 81st, Pittsburgh, Pa.
1700 Race St., Philadelphia, Pa.
389 St. Paul St., Rm. 106, Montreal, Que., Can.

AGENTS:

Heaton, W. H., 300 E. 23rd St., Birmingham,
Ala.
Bernard, Wm., Co., P.O. Box 1926, Phoenix,
Ariz.
Rehor, Robert M., 1709 W. 8th St., Los Angeles,
Calif.
Gaer, Glenn B., 1470 Galapago, Denver, Colo.
Holmyard, H. R., P.O. Box 107, Miami, Fla.
Kosin, George E., 144 Walker St., Atlanta, Ga.
Dickinson, Harry, 11 S. Meridian, Indianapolis,
Ind.
Dean, J. M., - Deo Eng., 1112 Locust, Des
Moines, Iowa
Corrigan, C. E., Jr., 506 Delta Bldg., New Or-
leans, La.
Sullivan, R. J., Co., 176 Federal St., Boston,
Mass.
Page, Cooper, Co., 617 National Bldg., Minne-
apolis, Minn.
Horn, W. F., & Co., 500 Porter Bldg., Kansas
City, Mo.
Deo Engineering Products, 4305 N. 54th, Omaha,
Nebr.
Guterman Co., Inc., 85 S. William, New York,
N.Y.
International Wld. Elec. Co., 50 Church, New
York, N.Y.
Naylor Elec. Co., 217 State Tower Bldg., Syra-
cuse, N.Y.
Rittenhouse, H. J., Co., 311 Alexander, Roches-
ter, N.Y.
Kurtz, Nufer, Mfrs. Agency, Hippodrome Annex
Bldg., Cleveland, Ohio
Kurtz, Nufer, Mfrs. Agency, 1021 19th, Canton,
Ohio
Munding, W. A., 106 Monroe St., Memphis,
Tenn.
Reed, L. R., Trough Bldg., Esch, Memphis,
Tenn.
Michler, P. A., 2807 Allen St., Dallas, Tex.
Winkler, B. T., 776A M&M Bldg., Houston,
Tex.
Slusser, L. M., 818 Dooley Bldg., Salt Lake
City, Utah
Wheat, W. W., & Son, 2219 4th Ave., Seattle,
Wash.
Beren, Harry, 2757 N. 40th St., Milwaukee, Wis.
Von Hamm Young Co., P.O. Box 2430, Honolulu,
Hawaii

Standard Electric Time Co., The
89 Logan St., Springfield, Mass.

BRANCH OFFICES:

1721 E. Harvey, Fresno, Calif.
5405 Nheila St., Los Angeles, Calif.
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1507 M. Street, N.W., Washington, D.C.
2216 W. Diversey Ave., Chicago, Ill.
1301 N. Johnson St., South Bend, Ind.
6305 So. West 10th St., Des Moines, Iowa
415 Natchez, New Orleans, La.
18 Brattle St., Cambridge, Mass.
8440 W. Nine Mile Rd., Oak Park, Mich.
4328 Russell Ave., N., Minneapolis, Minn.
4138 Broadway, Kansas City, Mo.
6414A So. Hampton Ave., St. Louis, Mo.
220 Delaware Ave., Buffalo, N.Y.
36 Church St., New York, N.Y.
2380 James St., Syracuse, N.Y.
2010 E. 102nd St., Cleveland, Ohio
79 E. State St., Columbus, Ohio
1221 Linwood, Oklahoma City, Okla.
1725 N.E. 44th, Portland, Ore.
Hessmer Bldg., Pittsburgh, Pa.
One Wynwood Bld., Wynwood, Pa.
10582 Spangler Rd., Dallas, Texas
4101 San Jacinto, Houston, Texas
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243 E. Third South, Salt Lake City, Utah
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7612 West State St., Milwaukee, Wis.

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Harison Sales Co., 619 So. 11th, Birmingham,
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Automatic Control & Equip. Co., 5759 Pecos St.,
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Fla.
G & P Supply Co., 2903 W. Hillsborough,
Tampa, Fla.
Hatcher Sales Co., 542 Forrest Rd., N.E., At-
lanta, Ga.
Hirsh Electronics, 1658 Union Ave., Memphis,
Tenn.
Electrical Engineering & Sales Corp., 2030 Texas
St., El Paso, Texas
Harding, John J., Co., 1514 Kona St., Honolulu,
Hawaii
Standard Electric Time Co. of Canada, Ltd.,
726 St. Felix, Montreal, Quebec, Can.

Standard Glove Co.
13200 Woodworth Rd., Cleveland 12, Ohio

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154 E. Delaware Rd., Toledo, Ohio
1635 Kipling Dr., Dayton, Ohio
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Standard Industrial Products Co. 60
920 N. Garfield Ave., Peoria, Ill.

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Orr Safety Equip. Co., 800 E. Main, Louisville,
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Orange, N.J.
Watson Co., 1448 Main, Buffalo, N.Y.
Acme Safety Prod. Co., 287 Storer Ave., Akron,
Ohio

Standard Safety Equipment Co. 9
232 W. Ontario St., Chicago 10, Ill.

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Universal Safety Equip., 9115 W. Diversey, Chi-
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Standard Industrial Prod., 116 S. Garfield,
Peoria, Ill.
Iowa Safety Equip. Co., 414-416 Twelfth St.,
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Orr Safety Equip., 1020 W. Main St., Louisville,
Ky.
Safety Services, Inc., 1903 W. Main St., Kala-
masoo, Mich.
Averill Equip. Co., 19235 Conant Ave., Detroit,
Mich.
Boyer-Campbell Co., 6549 St. Antoine St., Ire-
land, Mich.
Safety, Inc., 2608 Olive St., St. Louis, Mo.
Nette Safety Appl., 388 Main St., East Orange,
N.J.
Guardian Safety Equip., 400 S. Jefferson St.,
Orange, N.J.
American Allsafe Co., 1245 Niagara St., Buffalo,
N.Y.
Safety Clothing & Equip., 1090 E. 69th St.,
Cleveland, Ohio
Dayton Safety Supply, 316 Longworth St., Dayton,
Ohio
Acme Safety Prod. Co., 287 Storer Ave., Akron,
Ohio
Ohio Safety Prod. Co., 528 Reymour Ave., Colum-
bus, Ohio
Pondergast, A. W., Safety Equip., 2913 Tulip
St., Philadelphia, Pa.
Guardian Safety Equip., 214-16 S. 45th St.,
Philadelphia, Pa.
Semara, Fitter & Todd Co., 227 Fort Pitt Bld.,
Pittsburgh, Pa.
Genter, C. D., Co., 2109 Broad St., Chattanooga,
Tenn.

Manson, L. A., & Co., 2416 Bolsever, Houston,
Tex.
Levitt Safety Ltd., 747 Vaughan Rd., Toronto,
Ont., Can.
Safety Supply Co., 214 King St., E., Toronto,
Ont., Can.
Equipos de Seguridad, S.A., Sullivan 95, Mexico
City, Mex.

Standard Signs, Inc. 63
3190 E. 65th St., Cleveland 4, Ohio

Stephenson Corp. 65
P. O. Box 392, Red Bank, N. J.

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Birmingham, Ala.
Durr Surgical Supply Co., 238 Commerce St.,
Montgomery, Ala.
Alos, A. S., Co., 1150 S. Flower St., Los An-
geles, Calif.
McDonald, B. F., Co., 5731 W. 96th St., Los
Angeles, Calif.
Sherman, Earl, & Co., 2526 Wood St., Oakland,
Calif.
Western Fire Dept. Sup. Co., 1011 Larimer St.,
Denver, Colo.
Duncan Fire & Safety Equip., 105 S. Lincoln St.,
Wilmingon, Del.
Culbert, Glenn D., Co., 3217 13th St., N.E.,
Washington, D.C.
American Surgical Supply Corp., 480 Peachtree
St., Atlanta, Ga.
Hancock, J. H., 1634 Candler Bldg., Atlanta, Ga.
Fire & Safety Equip. Co., 3008 N. 7th St.,
Springfield, Ill.
Ronald, J. A., Co., 11227 Wallace St., Chicago,
Ill.
Ed's Fire Service, 1008 N. Crawford St., Carroll,
Iowa
Coe Surgical Supply Co., 806 E. Third St.,
Wichita, Kan.
Schmitt, Robert L., Co., 204 E. Main St., Louis-
ville, Ky.
Southern Surgical Sup. Co., 741 St. Charles St.,
New Orleans, La.
Eastern Fire Equip. Co., 402 Fore St., Portland,
Me.
Baumgartner, Murray, Surgical Instrument Co.,
5 W. Chase St., Baltimore, Md.
Yankon Engineering Co., Inc., 2500 Washington
Bld., Baltimore, Md.
Mushlin, Samuel, Co., 135 Freeman St., Brook-
line, Mass.
Nelson, A. E., Co., 13740 Long Lake Dr., Sparta,
Mich.
Randolph Surgical Sup. Co., 60 W. Columbia St.,
Detroit, Mich.
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S. E., Grand Rapids, Mich.
Platts, Joseph M., Co., 1461 Ogden Ave., Benton
Harbor, Mich.
Zink Safety Equip. Co., 709 W. 12th St., Kansas
City, Mo.
Zink Safety Equip. Co., 1110 S. Brentwood St.,
Louis, Mo.
Falvey Surgical Supply Co., 412 Morris Ave.,
Elizabeth, N.J.
Cochrane Physicians' Supply, Inc., 133 E. 58th
St., New York, N.Y.
Fire Fighting Equip. Co., 1129 Reymour Ave.,
Utica, N.Y.
Garrett, John B., Co., 1712 5th Ave., Troy, N.Y.
Nonan, T. J., Co., 879 New Scotland Ave.,
Albany, N.Y.
Rocklyn Surgical Supply Co., 65 N. Park Ave.,
Rockville Center, L.I., N.Y.
Surtree Surgical Supply Co., 115 E. Union St.,
Ray Shore, N.Y.
Youngs Fire Equip. Co., 1548 William St.,
Buffalo, N.Y.
Medical Gas Prod. Div. of National Welders,
State & Genco Bld., Charlotte, N.C.
Crocker-Fels Co., 215 E. 8th St., Cincinnati,
Ohio
Orr Safety Supply Co., 2853 Colerain Ave., Cin-
cinnati, Ohio
Radabaugh-Petser Co., 1787 E. 12th St., Cleve-
land, Ohio
Wilo Fire Equip. Co., 1123 S.E. Market St.,
Portland, Ore.
Fire Protection & Safety Equip. Co., 509 MacIay
St., Harrisburg, Pa.
Page, Arthur C., Assoc., 215 5th Ave., Dravos-
burg, Pa.
Clement Safety Equip. Co., 728 W. 3rd St.,
Memphis, Tenn.
Massey Surgical Supply, Inc., 2110 West End
Ave., Nashville, Tenn.
Massey Surgical Supply, Inc., 411 W. Main St.,
Knoxville, Tenn.
Smalling & Co., 604 Demonbroun St., Nashville,
Tenn.
Waters, Gordon, 5631 Ridgedale Ave., Dallas,
Tex.
Powers & Anderson, Inc., 1657 Broad St., Rich-
mond, Va.
Fire Protection Service, 1129 Mulberry Circle,
Charlottesville, W. Va.

Sterling Siren Fire Alarm Co., Inc.
6 Bartlett St., Rochester 8, N. Y.

Stonehouse Signs, Inc. 24
9th at Larimer, Denver 4, Colo.

Stop-Fire, Inc.
125 Ashland Place, Brooklyn 1, N. Y.

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Taller & Cooper, Inc.
75 Front St., Brooklyn, N. Y.

Taylor, S. G., Chain Co.
Box 509, Hammond, Ind.

Tect, Inc.
Cortland Ave. & Erie St., Dumont, N. J.

Turco Products, Inc.
6135 S. Central Ave., Los Angeles, Calif.

—U—

U-C Lite Mfg. Co.
1050 W. Hubbard St., Chicago 22, Ill.

Union Carbon and Carbide Co.
30 E. 42nd St., New York, N. Y.

U. S. Borax and Chemical Corp. 39
Pacific Coast Borax Co. Div.
630 Shatto Place, Los Angeles 5, Calif.

U. S. Safety Service Co. 96
1215 McGee St., Kansas City 6, Mo.

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1727 Ninth Ave., N., Birmingham, Ala.
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5814 College Ave., Oakland, Calif.
1630 17th St., Denver, Colo.
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424 "K" St., Washington, D.C.
323 Chandler Bldg., Atlanta, Ga.
11107 S. Longwood Dr., Chicago, Ill.
55 W. 30th, Box 5061, Indianapolis, Ind.
650 S. 5th, Louisville, Ky.
751 Little Bldg., Boston, Mass.
501 Mathison, Baltimore, Md.
15831 Jaa. Cousins Hy., Detroit, Mich.
210 S. 5th, Minneapolis, Minn.
614 Paul Brown Bldg., St. Louis, Mo.
1008 Prudential Bldg., Buffalo, N.Y.
189 5th Ave., Rm. 710, New York, N.Y.
712 State Tower Bldg., Syracuse, N.Y.
307 E. 4th St., Cincinnati, Ohio.
14812 Detroit Ave., Cleveland, Ohio.
Hartman Theater Bldg., Columbus, Ohio.
714 Enterprise Bldg., Tulsa, Okla.
412 Scott Bldg., Portland, Ore.
101 Investment Bldg., Pittsburgh, Pa.
1123 West'n. Bvgs. Fund Bldg., Philadelphia, Pa.
3822 Alameda, Houston, Tex.
504 Interurban Bldg., Dallas, Tex.
472 Smith Tower, Seattle, Wash.
432 Empire Bldg., Milwaukee, Wis.
Box 1518, Honolulu, T.H.
16 Reintman Ave., Toronto, Ont., Can. (Parmer-Lee Ltd.)
600 St. Catherine, Montreal, P.Q., Can. (Parmer-Lee Ltd.)

—V—

Victor Adding Machine Co.
Electric-Car Div.
3900 N. Rockwell St., Chicago 18, Ill.

—W—

Washington Products Co. 50
238 S. Fayette St., Washington C. H., Ohio

DISTRIBUTORS:

Midwest Fire & Safety Equip. Corp., 1605 Prospect St., Indianapolis, Ind.
American Fire Equip. Co., 717 Boylston St., Boston, Mass.
Garland Supply Co., Whitman, Mass.
Gold Crest Safety Equip. Corp., Highway 39, P.O. Box 155, Dunellen, N.J.
New Jersey Fire Equip. Corp., 1000 Washington Ave., Dunellen, N.J.
Hatch, V. E., & Son, 50-52 N. 19th St., East Orange, N.J.

Keefe & Keefe, Inc., 874 Lexington Ave., New York, N.Y.
Brooks, Earl A., U.S. Rt. No. 30, Coatesville, Pa.
Fyr-Fyter Sales & Service, Madison, Wis.

Wheeler Protective Apparel, Inc. 66
224 W. Huron St., Chicago 10, Ill.

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Safety Engr. & Supply Co., 617 N. 10th St., Birmingham, Ala.
Safety Engr. & Supply Co., P.O. Box 111, Mobile, Ala.
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Aweco Supply Co., 809 S. Park Ave., Tucson, Ariz.
Bollard, E. D., Co., 6719 S. Figueroa St., Los Angeles, Calif.
Bollard, E. D., Co., 2680 Bridgeway, Sausalito (San Francisco), Calif.
Industrial Safety Equip. Co., 574 New Park Ave., West Hartford, Conn.
Prot. Equip. Inc., 634 Orleans St., Chicago, Ill.
Prot. Equip. Inc., 2231 25th St., Rock Island, Ill.
Kinsey, E. A., Co., The, 1550 Stadium Dr., Indianapolis, Ind.
Mid-Continent Transmission & Supply, Inc., 2027 N. Broadway, Wichita, Kans.
Schmitt, Robert L., Co., 306 E. Main St., Louisville, Ky.
Guardian Safety Equip. Co., 3615 Capital Heights Ave., Baton Rouge, La.
Cutter, Wood & Sanderson Co., 222 Third St., Cambridge, Mass.
Streitinger, Charles A., 149 E. Larned St., Detroit, Mich.
Mars, W.P. & H.S., Co., 322 W. Michigan St., Duluth, Minn.
Safety Inc., 174 E. 31st St., Kansas City, Mo.
Safety Inc., 2608 Olive St., St. Louis, Mo.
Guardian Safety Equip. Co., 400 S. Jefferson St., Orange, N.J.
Elwood Co., The, 2180 Elwood, Buffalo, N.Y.
Syracuse Supply Co., 314 W. Fayette St., Syracuse, N.Y.
Safety First Supply Co., 4251 W. 35th St., Cleveland, Ohio.
Dayton Safety Supply, 11 Longworth St., Dayton, Ohio.
Safety First Supply Co., 858 W. Delaware Ave., Toledo, Ohio.
Sanderson Safety Supply Co., 816 Southeast Hawthorne, Portland, Ore.
Guardian Safety Equip. Co., 214 S. 45th St., Philadelphia, Pa.
Safety First Supply Co., 425 Magee St., Pittsburgh, Pa.
Safety Equip. Distrib., 832 W. Main St., Knoxville, Tenn.
Engineering Supply Co., 6000 Denton Dr., Dallas, Tex.
Guardian Safety Equip. Co., 1915 Westheimer, Houston, Tex.
Industrial Supply Co., Inc., 131 Social Hall Ave., Salt Lake City, Utah.
Safety & Supply Co., 115 Blanchard St., Seattle, Wash.
Spokane Safety Appliances, 219 N. Division, Spokane, Wash.
Safety First Supply Co., P.O. Box 1007, Charleston, W. Va.
Safety First Supply Co., 1 Garland Ave., Wheeling, W. Va.
Protective Equip. Inc., 2001 W. Capitol Dr., Milwaukee, Wis.

Willson Products, Div., Ray-O-Vac Co.
205 Washington St., Reading, Pa.

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Safety Engr. & Supply Co., Inc., P.O. Box 111, Mobile, Ala.
Bollard, E. D., Co., 6719 S. Figueroa St., Los Angeles, Calif.
Cameron & Barkley Co., 605 E. Forsyth St., Jacksonville, Fla.
Cameron & Barkley Co., 727 N. West First Ave., Miami, Fla.
Cameron & Barkley Co., P.O. Box 2748, Orlando, Fla.
Cameron & Barkley Co., 107 S. Franklin St., Tampa, Fla.
Cameron & Barkley Co., P.O. Box 1067, Savannah, Ga.
Safety Services, Inc., 1034 Fuller Ave., S.E., Grand Rapids, Mich.
Montana Hardware Co., P.O. Box 1219, Great Falls, Mont.
Syracuse Supply Co., 76 Wall St., Binghamton, N.Y.
Syracuse Supply Co., Seaway Div., Curtis Ave. & South St., Massena, N.Y.
Syracuse Supply Co., Intercity Div., Curry Rd., P.O. Box 447, Schenectady, N.Y.
Syracuse Supply Co., 314-332 W. Fayette St., Syracuse, N.Y.
Smith-Courtney Co., P.O. Box 925, Greensboro, N.C.
Smith-Courtney Co., P.O. Box 2448, Hickory, N.C.
Kinsey, E. A., Co., Inc., 1020 W. Fifth Ave., Columbus, Ohio.
Kinsey, E. A., Co., Inc., 16 Washington St., Dayton, Ohio.
Williams, David L., P.O. Box 5155, Akron, O.
Safety First Supply Co., 858 W. Delaware Ave., Toledo, Ohio.
Safety First Supply Co., 4251 W. 35th St., Cleveland, Ohio.

Engineering Supply Co., 1124 E. 4th St., Tulsa, Okla.
Pewee Supply Co., 720 Franklin St., Beaumont, Texas.
Bradley Industrial Supply Co., Pampa, Texas.
Hasseltine, J. E., & Co., 518 First Ave., S., Seattle, Wash.
Hasseltine, J. E., & Co., 1101 N. Division St., Spokane, Wash.
Safety First Supply Co., 1594 Jackson St., Charleston, W. Va.
Safety First Supply Co., No. 1 Garland Ave., Wheeling, W. Va.

DISTRIBUTORS:

Safety Engr. & Supply Co., Inc., 617 N. 10th St., Birmingham, Ala.
Breton Equip. Co., 374 Brannon St., San Francisco, Calif.
Bollard, E. D., Co., 275 Eighth St., San Francisco, Calif.
Guardian Safety Equip. Co., 2223 S. Main St., Los Angeles, Calif.
Hendrie & Holthoff Co., 1635 17th St., Denver, Colo.
Industrial Safety Supply Co., 574 New Park Ave., West Hartford, Conn.
Protective Equip. Co., 634 Orleans St., Chicago, Ill.
Kinsey, E. A., Co., 1550 Stadium Dr., Indianapolis, Ind.
Pittenger & Davis, Inc., 911 E. Third St., Wichita, Kans.
Stone, L. H., Supply Co., 405 N. 6th St., Kansas City, Kans.
Neill-LaVie Supply Co., 2211 S. Brook St., Louisville, Ky.
Orr Safety Equip. Co., 300 E. Main St., Louisville, Ky.
Steward, Wright & Co., Ltd., P.O. Box 370, 451 Howard Ave., New Orleans, La.
Carey Machinery & Supply Co., 3501-07 Brehm's Lane, Baltimore, Md.
Lewis, Chas. C., Co., 209 Page Bldg., Springfield, Mass.
Cutter, Wood & Sanderson Co., 222 Third St., Cambridge, Mass.
Blake, Geo. F., Co., 198 Mechanic St., Worcester, Mass.
Safety Service, Inc., 1903 W. Main St., Kalamazoo, Mich.
Streitinger, Chas. A., Co., 149 E. Larned St., Detroit, Mich.
Farwell, Ozmun, Kirk & Co., 2nd & Jackson St., St. Paul, Minn.
Sligo, Inc., 1301 N. Sixth St., St. Louis, Mo.
Montana Hardware Co., 823 S. Montana St., Butte, Mont.
Interstate Machinery & Supply Co., 1006 Douglas St., Omaha, Neb.
American Allsafe Co., Inc., 1245 Niagara St., South, N.Y.
Smith, W. L., Co., 165 Broadway, Newburgh, N.Y.
Syracuse Supply Co., 314-332 W. Fayette St., Syracuse, N.Y.
Troy Belting & Supply Co., 6 & 8 Grand St., Troy, N.Y.
Wilson, W. S., Corp., 47-50 35th St., Long Island City, N.Y.
Kinsey, E. A., Co., Inc., 331 W. Fourth St., Cincinnati, Ohio.
Hart Industrial Supply Co., 726 W. Grand Ave., Oklahoma City, Okla.
Krisman Industrial Supply Co., 308 E. Fourth St., Tulsa, Okla.
Hasseltine, J. E., & Co., 115 S.W. Second Ave., Portland, Ore.
Industrial Products Co., 2850 N. 4th St., Philadelphia, Pa.
Pendergast, Albert W., Safety Equip. Co., 6013 Tulip St., Philadelphia, Pa.
Potter, L. B., & Co., 603 W. Lackawanna Ave., Scranton, Pa.
Quaker City Railroad Sales Co., Phila. National Bank, Philadelphia, Pa.
Safety First Supply Co., 425 Magee St., Pittsburgh, Pa.
Tierney, James E., 131 Washington St., Providence, R.I.
Carolina Supply Co., 35 W. Court St., Greenville, S.C.
Cameron & Barkley Co., 160 Meeting St., Charleston, S.C.
Clement Safety Equip. Inc., 720 S. Third St., Memphis, Tenn.
Genter, C. D., Co., 2109-13 Broad St., Chattanooga, Tenn.
Mine & Smelter Supply Co., 1515-11th St., El Paso, Tex.
Flowers Supply Co., 6300 Navigation Blvd., Houston, Tex.
Southwest Equip. & Extinguisher Co., 526 Palm Drive, Corpus Christi, Tex.
Allied Safety Equip. Co., 452-62 M & M Bldg., Houston, Tex.
Bradley Industrial Supply Co., 328 E. 3rd St., Borger, Tex.
Engineering Supply Co., 6000 Denton Drive, Dallas, Tex.
Industrial Supply Co., Inc., 121-135 Social Hall Ave., Salt Lake City, Utah.
Casper Supply Co., 441-448 S. Center St., Casper, Wyo.

Witt Cornice Co.

2118 Winchell Ave., Cincinnati 14, Ohio

Wooster Brass Div., The Fyr-Fyter Co.

1415 E. Bowman St., Wooster, Ohio

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A

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Bullard, E. D., Co.
Davis Emergency Equipment Co., Inc.
Johnson-Williams, Inc.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equip. Co.
Safety First Supply Co.
Taller & Cooper, Inc.

Alarms, Fire

"Automatic" Sprinkler Corp., of America
Du Kane Corp.
Electronics Corp. of America
Falcon Alarm Co., Inc.
Federal Sign & Signal Corp.
Fenwal, Inc.
Gamewell Co.
Grinnell Co., Inc.
Kiddie, Walter & Co., Inc.
Notifier Corp.
Pyrene C-O-Two Div.
The Fyr-Fyter Co.
Safety First Supply Co.
Searjeant Metal Products, Inc.
Sperli Paraday, Inc.
Standard Electric Time Co.
Sterling Siren Fire Alarm Co., Inc.
Taller & Cooper, Inc.

Alarms, Smoke

Cardox Corp.
Davis Emergency Equip. Co., Inc.
Electronic Control Corp.
Electronics Corp. of America
Kiddie, Walter & Co., Inc.
New Jersey Safety Equip. Co.
Searjeant Metal Products Co.
Taller & Cooper, Inc.

Arresters, Flame

New Jersey Safety Equipment Co.
Protectosol Co., The

Asbestos Cloth for Safety Clothing

Raybestos-Manhattan, Inc.

Ash Trays, Industrial

Safety Floor Products

B

Beryllium Non Sparking Tools

Beryllium Corp.
Boyer-Campbell Co., The
General Scientific Equipment Co.
McDonald, B. F., Co.
Pulmonan Safety Equipment Corp.
Rose Mfg. Co.
Safety Clothing & Equipment Co.
Scientific Industrial Supply Co.

Blankets, Fireproofed

Advance Glove Mfg. Co.
Alloy Mfg. Co., Inc.
Allied Glove Co.
American Allsafe Co., Inc.
Associated Bag & Apron Co.
Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.
Central Safety Equipment Co.
Davis Emergency Equipment Co., Inc.
Eastern Safety Equipment Co.
Fisher Scientific Co.
Fronnell Industries
General Scientific Equipment Co.
Halperin, A. E., Co., Inc.
Holcomb Safety Garment Co.
Industrial Gloves Co.
Industrial Products Co.
Karel First Aid Supply Co.
Kennedy-Ingalls, V. E., Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Equipment Co.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Sawyer Safety Products Co.
Scientific Industrial Supply Co., Inc.
Searjeant Metal Products, Inc.
Seeo Safety Products Co.
Singer Glove Mfg. Co.
Standard Glove Co.
Standard Safety Equipment Co.
Wheeler Protective Apparel, Inc.

Breathing Apparatus,

Air Supplied

Acme Protection Equipment Co.
American LaFrance Corp.
Bomgardner Mfg. Co.
Brenton Equip. Co.
Bullard, E. D., Co.
Central Safety Equipment Co.
Davis Emergency Equipment Co.
Dockson, Corp.
Genter, C. D., Co.
Karel First Aid Supply Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Safety First Supply Co.
Scott Aviation Corp.

C

Cans, Safety

Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.
Central Safety Equip. Co.
Damerton Enterprises, Inc.
Eagle Mfg. Co.
Fisher Scientific Co.
Franklin, Bernard, Co., Inc.
General Scientific Equip. Co.
Genter, C. D., Co.
Industrial Products Co.
Justite Mfg. Co.
McDonald, B. F., Co.
Miller Products Co., Inc.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Polla, J. D., Mfg. Co.
Protectosol Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Searjeant Metal Products, Inc.
Seeo Safety Products Co.
Standard Glove Co.
Standard Safety Equipment Co.
Wallace Optical Co., Inc.
Witt Cornice Co.

Canvas, Fireproofed

Advance Glove Mfg. Co.
Alloy Mfg. Co., Inc.
Allied Glove Co.
Associated Bag & Apron Co.
Boyer-Campbell Co.
Brenton Equip. Co.
Central Safety Equipment Co.
Eastern Safety Equip. Co.
Fronnell Industries
General Scientific Equip. Co.
Genter, C. D., Co.
Holcomb Safety Garment Co.
Industrial Gloves Co.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
Kimball Safety Products
McDonald, B. F., Co.
Miller Products Co., Inc.
Racine Glove Co., Inc.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scientific Industrial Supply Co., Inc.
Searjeant Metal Products, Inc.
Seeo Safety Products Co.
Singer Glove Mfg. Co.
Wheeler Protective Apparel, Inc.

Chain, Spark Resisting

Ampco Metal, Inc.
Columbus McKinnon Chain Corp.
Taylor, S. G., Chain Co.

Clothing, Fireproofed

Adair, Robin W., Co.
Advance Glove Mfg. Co.
Alloy Mfg. Co., Inc.
Allied Glove Co.
American Allsafe Co., Inc.
American LaFrance Corp.
American Optical Co.
Boyer-Campbell Co.
Brenton Equip. Co.
Bullard, E. D., Co.
Central Safety Equipment Co.
Davids Gloves, Inc.
DuPont, E. I., de Nemours & Co.
Dunn Products
Far-Ex Corp.
Fronnell Industries
Pyrene Products, Inc.
General Scientific Equipment Co.
Genter, C. D., Co.
Holcomb Safety Garment Co.
Industrial Gloves Co.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
Kearney & Mattison Co.
Kimball Safety Products
McDonald, B. F., Co.
Milburn Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Olympic Glove Co., Inc.
Pulmonan Safety Products Co.
Pulmonan Safety Equipment Corp.
Racine Glove Co., Inc.
Recent Industrial Company
Safety Clothing & Equipment Co.
Safety First Supply Co.
Sawyer Safety Products Co.
Scientific Industrial Supply Co., Inc.
Searjeant Metal Products, Inc.
Singer Glove Mfg. Co.
Standard Glove Co.
Standard Safety Equipment Co.
Wheeler Protective Apparel, Inc.

Containers, Explosive Liquid

Eagle Mfg. Co.
Industrial Products Co.
Justite Mfg. Co.
McDonald, B. F., Co.
New Jersey Safety Equipment Co.
Polla, J. D., Mfg. Co.
Protectosol Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.

Covers, Self-Closing

Hustin Steel Products, Inc.
Protectosol Co.

Curtains, Fireproofed

Allied Glove Co.
Advance Glove Mfg. Co.
American Allsafe Co., Inc.
Associated Bag & Apron Co.
Boyer-Campbell Co.
Brenton Equip. Co.
Brossard, Lester L., Co.
Central Safety Equipment Co.
Cotton Glove Mfg. Co.
Eastern Safety Equipment Co.
Far-Ex Corp.
Fronnell Industries
General Scientific Equipment Co.
Genter, C. D., Co.
Holcomb Safety Garment Co.
Industrial Gloves Co.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
Kimball Safety Products
McDonald, B. F., Co.
Milburn Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Products Co.
Pulmonan Safety Equipment Corp.
Racine Glove Co., Inc.
Safety Clothing and Equipment Co.
Safety First Supply Co.
Sawyer Safety Products Co.
Scientific Industrial Supply Co., Inc.
Searjeant Metal Products, Inc.
Seeo Safety Products Co.
Singer Glove Mfg. Co.
Standard Glove Co.
Standard Safety Equipment Co.
Trans Wall Coated Products—
Hemis Rm. Bag Co.
Wheeler Protective Apparel, Inc.

Curtains, Welder's

Advance Glove Mfg. Co.
Allied Glove Co.
American Allsafe Co., Inc.
Associated Bag & Apron Co.
Hemis Rm. Bag Co.—Trans Wall Coated Products
Boyer-Campbell Co.
Brenton Equip. Co.
Brossard, Lester L., Co.
Bullard, E. D., Co.
Central Safety Equipment Co.
Eastern Safety Equipment Co.
Fronnell Industries
General Scientific Equipment Co.
Genter, C. D., Co.
Holcomb Safety Garment Co.
Industrial Gloves Co.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
Kimball Safety Products
McDonald, B. F., Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Products Co.
Pulmonan Safety Equipment Corp.
Racine Glove Co., Inc.
Safety Clothing & Equipment Co.
Sawyer Safety Products Co.
Searjeant Metal Products, Inc.
Seeo Safety Products Co.
Singer Glove Mfg. Co.
Standard Glove Co.
Standard Safety Equipment Co.
Trans Wall Coated Products—
Hemis Rm. Bag Co.
Wheeler Protective Apparel, Inc.

D

Detectors, Fire

American LaFrance Corp.
"Automatic" Sprinkler Corp. of America
Cardox Corp.
Davis Emergency Equipment Co.
Falcon Alarm Co., Inc.
Fenwal Incorporated
Gamewell Co.
Grinnell Co., Inc.
Kiddie, Walter & Co., Inc.
Mine Safety Appliances Co.
Notifier Corp.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Taller & Cooper, Inc.

Detectors, Gas

Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.
Curtis Wright Corp.
General Scientific Equipment Co.
Johnson-Williams, Inc.
Krugger, Harold Instruments
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equip. Co.
Taller & Cooper, Inc.

Detectors, Smoke

Cardox Corp.
Davis Emergency Equipment Co.
General Scientific Equipment Co.
Johnson-Williams, Inc.
Kiddie, Walter & Co., Inc.
Krugger, Harold Instruments
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Safety First Supply Co.
Searjeant Metal Products, Inc.
Taller & Cooper, Inc.

See Directory of Fire Protection and Control Equipment Sources for addresses.

Directory of Codes, Standards and References

Loss Control Associates

Doors, Fire and Service

Klonner Mfg. Co.
Trans Wall Coated Products,
Hemla Hrs. Bag Co.

Doors, Panic Device

American Allsafe Co., Inc.

E

Electronic Indicating Ground,

Excel Electric Service Co.
Gilbert & Barker Mfg. Co.

Emergency Lighting

American Allsafe Co., Inc.
American Optical Co.
Boyer-Campbell Co.
Carpenter Mfg. Co.
Dual Lite Co.
Dymasal Corp.
Eastern Metal of Kimira, Inc.
Electric Cord Co.
Exide Industrial Div., Electric
Storage Battery Co.
General Scientific Equipment Co.
Justite Manufacturing Company
Karel First Aid Supply Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equip. Co.
Nickel Cadmium Battery Corp.
Pyle National Co.
Prairie State Products Co.
Safety Clothing & Equipment Co.
Seco Safety Products Co.
Standard Electric Time Co.
U. C. Lite Mfg. Co.

Explosion-Proof Switches

Micro Switch Div. of Minneapolis
Honeywell Regulator Co.
Pyle National Co.

F

Fire Alarms

Falcon Alarm Co., Inc.
Federal Sign & Signal Corp.
Gamewell Co.
Grinnell Co., Inc.
Kiddie, Walter & Co., Inc.
Lord-Tabor Co., Inc.
Notifier Corp.
Pyrene C-O-Two Div.
The Fyr-Fyter Co.
Safety First Supply Co.
Sperti Faraday, Inc.
Standard Electric Time Co.
Sterling Siren Fire Alarm Co., Inc.

Fire Detectors

American-LaFrance Corp.
"Automatic" Sprinkler Corp. of
America
Cardox Corp.
Electronics Corp. of America
Falcon Alarm Co., Inc.
Fenwal Inc.
Gamewell Co.
Grinnell Co., Inc.
Kiddie, Walter & Co., Inc.
Lord-Tabor Co., Inc.
Mine Safety Appliances Co.
Notifier Corp.
Pyrene C-O-Two Div.
The Fyr-Fyter Co.

Fire Extinguishers

Ace Fire Equipment Co.
Allen, W. D., Mfg. Co.
American Industrial Safety
Equipment Co.
American-LaFrance Corp.
Ansol Chemical Co.
"Automatic" Sprinkler Corp.
of America
Cardox Corp.
Brenton Equip. Co.
Buffalo Fire Appliance Corp.
Fire Equipment Development Co.
Cardox Corp.
Firetex System, Inc.
Flaher Scientific Co.
Fyr-Fyter Co., The
Genter, C. D., Co.
Justite Mfg. Co.
Kiddie, Walter & Co., Inc.
Lester Mfg. Co.
M. M. A. Inc.
McDonald, B. F., Co.
National Foam System, Inc.
Protecton Co. The
Pulmonan Safety Equipment Corp.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Randolph Laboratories, Inc.
Red Comet, Inc.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scientific Industrial Supply Co., Inc.
Sealant Metal Products, Inc.
Seco Safety Products Co.
Smith, D. B., & Co., Inc.

Snyder, M. L., & Son, Inc.
Stop-Fire, Inc.

Fire Extinguisher Recharges and Equipment

Ace Fire Equipment Co.
Allen, W. D., Mfg. Co.
American-LaFrance Corp.
Ansol Chemical Co.
Brenton Equip. Co.
Genter, C. D., Co.
Kiddie, Walter & Co., Inc.
Nat'l Foam System, Inc.
Pulmonan Safety Equipment Corp.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Randolph Laboratories, Inc.
Red Comet, Inc.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scientific Industrial Supply Co., Inc.
Seco Safety Products Co.
Stop-Fire, Inc.

Fire Extinguisher Seals

Ace Fire Equipment Co.
Genter, C. D., Co.
Red Comet, Inc.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Seco Safety Products Co.

Fire Extinguishing Foam

Ace Fire Equipment Co.
Allen, W. D., Mfg. Co.
American-LaFrance Corp.
"Automatic" Sprinkler Corp.
of America
Central Safety Equipment Co.
Genter, C. D., Co.
Grinnell Co., Inc.
National Foam System, Inc.
Pulmonan Safety Equipment Corp.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Rockwood Sprinkler Corp.
Safety First Supply Co.
Scientific Industrial Supply Co., Inc.
Seco Safety Products Co.

Fire Extinguishing Systems

Allen, W. D., Mfg. Co.
American-LaFrance Corp.
Ansol Chemical Co.
"Automatic" Sprinkler Corp.
of America
Bean, John, Div. Food Machine
& Chemical Corp.
Cardox Corp.
Central Safety Equip. Co.
Firetex System, Inc.
Genter, C. D., Co.
Grinnell Co., Inc.
Kiddie, Walter & Co., Inc.
National Foam System, Inc.
Pyrene C-O-Two Division
The Fyr-Fyter Co.
Randolph Laboratories, Inc.
Red Comet, Inc.
Seco Safety Products Co.

Fire Foam Generators

American-LaFrance Corp.
Central Safety Equipment Co.
Grinnell Co., Inc.
National Foam System, Inc.
Safety First Supply Co.
Seco Safety Products Co.

Fire Hose

Allen, W. D., Mfg. Co.
American Allsafe Co., Inc.
American-LaFrance Corp.
Bean, John, Division
Food Machinery & Chemical Corp.
Genter, C. D., Co.
Goodrich, B. F., Co.
Goodyear Industrial Products Co., Inc.
Miller Products Co., Inc.
New York Belling & Packing Co.
Pulmonan Safety Equipment Co.
Safety First Supply Co.
Scientific Industrial Supply Co., Inc.
Seco Safety Products Co.

Fire Hose, Mine

Mine Safety Appliances Co.

Fire Hose Reels

American-LaFrance Corp.
Central Safety Equipment Co.
Bean, John, Div. Food Machine
& Chemical Corp.
Hannay, Clifford B., & Sons, Inc.

Fire Nozzles

Akron Brass Mfg. Co.
Allen, W. D., Mfg. Co.
Combustion Brass & Iron Works
American Allsafe Co., Inc.
American-LaFrance Corp.
Ansol Chemical Co.
"Automatic" Sprinkler Corp.
of America
Bean, John, Div. Food Machine
& Chemical Corp.
Central Safety Equipment Co.
Eastman, Samuel, Co., Inc.
Genter, C. D., Co.
McIntyre, F. N. Brass Works, Inc.
Rockwood Sprinkler Corp.
Seco Safety Products Co.

Fire Pumps

American-LaFrance Corp.

Ansol Chemical Co.
Bean, John, Div. Food Machine
& Chemical Corp.
Ingersoll-Rand Co.
Marlow Pumps, Div. Bell & Gossett
Co.
Safety First Supply Co.
Smith, D. B., & Co., Inc.

Fire Sirens

American-LaFrance Corp.
Bongardner Mfg. Co.
Federal Sign & Signal Corp.
Gamewell Co.
Genter, C. D., Co.
Pyle National Co.
Seco Safety Products Co.
Sterling Siren Fire Alarm Co., Inc.

Fire Trucks

American-LaFrance Corp.
Ansol Chemical Co.
Bean, John, Div. Food Machine
& Chemical Corp.
C. M. C. Co.
Cardox Corp.
Seagrave Corp. The
Seco Engineering & Mfg. Inc., Div.
of Seco Safety Products Co.
Victor Adding Machine Co., Electric Car
Div.

First Aid Supplies

Bullard, E. D., Co.
Chesbrough-Ponds, Inc.
Davis Emergency Equip. Co., Inc.
Halperin, A. E., Co. Inc.
Industrial Products Co.
Karel First Aid Supply Co.
Medical Supply Co.
Mine Safety Appliances Co.
Pac-Kit Co.

Flame Retardant for Fabrics

Central Safety Equipment Co.
DuPont, E. I., de Nemours & Co., Inc.
Flamont Chemical Co.
Frommelt Industries
Huntington Laboratories, Inc.
McDonald, B. F., Co.
New Jersey Safety Equipment Co.
Wheeler Protective Apparel, Inc.

Fluids, Fire Resistant-Hydraulic

Celanese Corp. of America
Houghton, E. F., & Co.
Monsanto Chemical Co.
Shell Oil Co.
Union Carbide Co.

Fog Guns

Bean, John, Div. Food Machine
& Chemical Corp.
Cardox Corp.
Central Safety Equipment Co.
Genter, C. D., Co.
Seco Safety Products Co.

Fog-Nozzle

Akron Brass Mfg. Co.
Allen, W. D., Mfg. Co.
"Automatic" Sprinkler Corp.
of America
Bean, John, Div. Food Machine
& Chemical Corp.
Blaw-Knot Co.
Cardox Corp.
Central Safety Equipment Co.
Genter, C. D., Co.
Safety First Supply Co.
Seco Safety Products Co.

Fog Pumps

Bean, John, Div. Food Machine
& Chemical Corp.
Seco Safety Products Co.

G

Gongs, Sirens, Horns and other

Signaling Devices
American-LaFrance Corp.
"Automatic" Sprinkler Corp.
of America
Bullard, E. D.
Falcon Alarm Co., Inc.
Gamewell Co. The
Genter, C. D., Co.
McDonald, B. F., Co.
Safety First Supply Co.
Seco Safety Products Co.

H

Helmets, Fireman's

American Allsafe Co., Inc.
American-LaFrance Corp.
Brenton Equip. Co.
Bullard, E. D., Co.
Davis Emergency Equip. Co., Inc.
Fibre-Metal Products Co.
General Scientific Equipment Co.
General Textile Mills, Inc.
Genter, C. D., Co.
Industrial Gloves Co.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equip.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Seco Safety Products Co.
Wheeler Protective Apparel, Inc.

To locate Advertisements, see Advertisers' Index.

I

Indicators, Flammable Vapors

Brenton Equip. Co.
Davis Emergency Equip. Co., Inc.
General Scientific Equipment Co.
Johnson-Williams, Inc.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Safety First Supply Co.
Teller & Cooper, Inc.

Indicators, Gas

Brenton Equip. Co.
Bullard, E. D., Co.
Davis Emergency Equip. Co., Inc.
General Scientific Equipment Co.
Kruger, Harold, Instruments
Johnson-Williams, Inc.
McDonald, B. F., Co.
Mine Safety Appliances Co.
National Mine Services Co.
New Jersey Safety Equipment Co.
Safety First Supply Co.
Teller & Cooper, Inc.
U. S. Safety Service Co.

Indicators, Oxygen Deficiency

Brenton Equip. Co.
Davis Emergency Equip. Co., Inc.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equip. Co.

Inhalators

American-LaFrance Corp.
Bongardner Mfg. Co.
Boyer-Campbell Co., The
Brenton Equip. Co.
Davis Emergency Equip. Co., Inc.
E & J Mfg. Co.
Emergency Oxygen Inhalators, Inc.
Emerson, J. H., Co.
General Scientific Equipment Co.
Halperin, A. E., Co., Inc.
Karel First Aid Supply Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scott Aviation Corp.
Stephenson Corp.

L

Lamps, Explosion Proof

Boyer-Campbell Co., The
Brenton Equip. Co.
Brown, Stewart R., Mfg. Co., Inc.
Electric Cord Co.
General Scientific Equipment Co.
Justrite Manufacturing Co.
Karel First Aid Supply Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pyle-National Co.
Safety Clothing & Equipment Co.
U-C Lite Mfg. Co.

M

Mobile First Aid Equipment

Bongardner Mfg. Co.
Brenton Equip. Co.
Davis Emergency Equipment Co., Inc.
Karel First Aid Supply Co.
Mine Safety Appliances Co.

N

Non Sparking Tools

Beryllium Corp., The
Boyer-Campbell Co., The
Custanite Corp.
General Scientific Equipment Co.
McDonald, B. F., Co.
Rose Mfg. Co.
Safety Clothing & Equipment Co.
Scientific Industrial Supply Co., Inc.

Nozzles

Akron Brass Works, Inc.
Allen, W. D., Mfg. Co.
"Automatic" Sprinkler Corp. of America
American-LaFrance Corp.
Cardox Corp.
Central Safety Equipment Co.
John Bean Div., Food Machinery & Chemical Corp.
Genter, C. D., Co.
Johnson-March Corp.
McIntire, F. N., Brass Works, Inc.
New Safety Products Co.

O

Oxygen Breathing Apparatus

Acme Protection Equipment Co.
Aloe, A. S., Co.
Bongardner Mfg. Co.
Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.

Central Safety Equipment Co.
Cycle-Flo Co.
Davis Emergency Equipment Co., Inc.
E & J Mfg. Co.
General Scientific Equipment Co.
Genter, C. D., Co.
Karel First Aid Supply Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Safety First Supply Co.
Stephenson Corp.

P

Pumps, Foam

Cardox Corp.
Central Safety Equipment Co.

R

Radiation Detectors

Curtiss-Wright Corp.
McDonald, B. F., Co.

Rescue Suits

Brenton Equip. Co.
Bullard, E. D., Co.
Far-Ex Corp.
General Scientific Equipment Co.
Industrial Glove Co.
Kennedy-Ingalls, V. E., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Seo Safety Products Co.
Wheeler Protective Apparel, Inc.

Respirators, Fume

Acme Protection Equipment Co.
American Industrial Safety Equip. Co.
American Optical Co.
Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.
Davis Emergency Equipment Co., Inc.
Duckson Corp.
Eastern Safety Equipment Co.
General Scientific Equipment Co.
Genter, C. D., Co.
Halperin, A. E., Co., Inc.
Industrial Products Co.
Kennedy-Ingalls, V. E., Co.
McDonald, B. F., Co.
Mine Safety Appliances Co.
New Jersey Safety Equipment Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scott Aviation Corp.
Searjeant Metal Products, Inc.
Seo Safety Products Co.
Standard Safety Equipment Co.
Wallace Optical Co., Inc.
Willson Products, Inc.

Resuscitation Equipment

Bongardner Mfg. Co.
Boyer-Campbell Co., The
Brenton Equip. Co.
Bullard, E. D., Co.
Cycle-Flo Co.
Davis Emergency Equipment Co., Inc.
E & J Mfg. Co.
Emergency Oxygen Inhalators, Inc.
Emerson, J. H., Co.
General Scientific Equipment Co.
Globe Industries, Inc.
Halperin, A. E., Co., Inc.
Karel First Aid Supply Co.
McDonald, B. F., Co.
Medical Supply Co.
Midwest Oxygen Equip. Co.
Mine Safety Appliances Co.
New Jersey Safety Equip. Co.
Ohio Chemical & Surgical Equipment Co.
Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Scott Aviation Corp.
Stephenson Corp.

S

Seal for Fire Extinguishers

Genter, C. D., Co.
Safety Clothing & Equipment Co.
Safety First Supply Co.
Seo Safety Products Co.

Shoes, Non-Sparking

Hy-Test Safety Shoes
Div. International Shoe Co.
Iron Age Safety Shoe Div.,
H. Childs & Co., Inc.
Lehigh Safety Shoes Co.
Mine Safety Appliances Co.
Record Industrial Co.
Wolverine Shoes & Tanning Corp.

Signs, Fire Prevention

Davenport, A. C., and Son, Inc.
Eastern Metal of Elmira
Industrial Products Co.
Mine Safety Appliances Co.
Minnesota Mining & Mfg. Co.—
Reflective Sheetings Div.
Prairie State Products Co.
Ready Made Sign Co., Inc.
Standard Signs, Inc.
Stonehouse Signs, Inc.

Sirens and Signals

Bongardner Mfg. Co.
Falcon Alarm Co., Inc.
Federal Sign & Signal Corp.
(Janssens) Co.
Genter, C. D., Co.
Hertling Siren Fire Alarm Co., Inc.
Vari-Products Co.

Smoker's Stand

Davenport, A. C., and Son, Inc.
Karel First Aid Supply Co.
New Jersey Safety Equipment Co.
Protectoseal Co.
Safety Clothing & Equip. Co.
Searjeant Metal Products, Inc.
Standard Industrial Products Co.

Solvents, Safety

Curtan Corp.
Dow Chemical Co.
Fine Organics, Inc.
Teel, Inc.
Turco Products, Inc.

Sprinkler Systems

Ansol Chemical Co.
"Automatic" Sprinkler Corp.
of America
Blaw-Knot Co.
Central Safety Equip. Co.
Grinnell Co., Inc.
Notifier Corp.
Reliable Automatic Sprinkler Co., Inc.
Rockwood Sprinkler Co.

Static Ground Device, Personnel

Brown, Stewart R., Mfg. Co., Inc.
Conductive Hospital Accessories Corp.
Gilbert-Harker Co.
Lodge, Walter U., Co., Inc.

Stretchers

American Allsafe Co., Inc.
Bongardner Mfg. Co.
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Brenton Equip. Co.
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Central Safety Equipment Co.
Davis Emergency Equip. Co., Inc.
Genter, C. D., Co.
Halperin, A. E., Co., Inc.
Industrial Products Co.
Junkin Safety Appliances Co.
Karel First Aid Supply Co.
Kennedy-Ingalls, V. E., Co.
McDonald, B. F., Co.
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Mine Safety Appliances Co.
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Pulmonan Safety Equipment Corp.
Safety Clothing & Equipment Co.
Safety First Supply Co.
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Searjeant Metal Products, Inc.
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Standard Glove Co.
Standard Safety Equipment Co.
Washington Products Co.

Stretcher Kits and Cases

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New Jersey Safety Equipment Co.
Safety Clothing & Equip. Co.
Saris, Inc.
Searjeant Metal Products, Inc.
Seo Safety Products Co.
Standard Safety Equipment Co.
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W

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Safety Clothing & Equipment Corp.
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Scientific Industrial Supply Co., Inc.
Shinkler, Michael A., Mfg. Co.
Standard Safety Equipment Co.

THE SAFETY VALVE



Nothing human is alien to me

—TERENCE

"Whether There Be Prophecies . . ."

THE NEXT 25 YEARS, says *Changing Times* (the Kiplinger magazine) will be America's "growingest quarter century." The June issue indulges in the popular sport of previewing the future — and how readers love this stuff!

Material comforts will surround us in 1982. Spare time will be multiplied; so will opportunities for travel and recreation. We'll have more money and more things to spend it on.

We'll work in bright, clean factories and colorful, glamorous offices. Machines will do most of the drudgery but they won't be able to think. (Thinking can be drudgery, too).

Only poor relations will get along with one car. Detroit plans three for every garage — a high-powered highway cruiser for long trips, a lighter job for around town, and a slick sports model for commuters. (A few people may still have to get along with a five-year-old Chevy or a Volkswagen.)

There will be 130,000,000 assorted motor vehicles on the road and a vast network of superhighways. (Let's hope the petroleum holds out.) You'll cross the continent at 70 to 80 miles an hour without coming to a city, traffic light, or a grade crossing. With electronic highways you'll sit back and relax. Electronic controls will maintain your car at a constant speed and at a fixed distance from cars in front of you and behind.

But, we are warned, parking will be an unresolved headache.

Accidents? We'll still have 'em. *Changing Times* predicts the 2,000,000th traffic victim by the early 1970's — unless there's an unforeseen improvement in the experience.

How are we going to pay for all of this? Oh, everybody will be getting at least twice as much money. How much a dollar will be worth then is anybody's guess. High government spending, rising wage levels, population growth and the need for capital will supply the inflationary pressures.

How can we meet inflation? It's very simple — just invest your surplus cash in industries with the great promise of growth and your dollars will grow with them.

Pension plans will multiply. Many of them will be designed to pay off in dollars adjusted for shifts in purchasing power. (If you have one of the old-fashioned pensions without an escalator, you may have some lean days ahead.)

Cures for many diseases will be available — even mental illness. That is surprising since so many

mental troubles are blamed on trying to keep up with a fast-moving world, and we really haven't seen anything yet.

Dark clouds on the 1982 horizon are the problems of feeding an expanded population and shortages of many materials — including water. But maybe scientists will be able to get everything we need from the sea.

Want to read some more? Just send two bits to *Changing Times*, 1729 H. Street, N.W., Washington, D. C., for a reprint of this 10-page article.

Strong Right Arms

THERE IS a lot of work a man must do alone. Conscience or pride keeps him calling for help. But there are many jobs where he needs spiritual or physical help.

We all know how a good boss can inspire men. But help and inspiration travel in both directions. Many an executive has owed much to the loyal and friendly backing of his subordinates — perhaps to some individual.

Lee had many able lieutenants on his staff. But among them was one who had the unusual gift of grasping his chief's plans and carrying them out brilliantly and energetically. There was also a strong personal bond between them. The loss of Stonewall Jackson made Chancellorsville a barren victory.

The boss is often a lonely man. He has tough decisions to make and he too is fallible. There is an inevitable gap between him and his men, sometimes of his own making. He may be insulated from reality because subordinates hate to tell him unpleasant facts. They may be timid about expressing their views, even when reason is on their side. Some loyal men are afraid that any display of friendliness may be regarded as presumptuousness or apple polishing.

Certainly, men can't be expected to agree on everything. It wouldn't be a healthy state of affairs if they did. But it helps to have essential harmony on goals and ideals and a respect for each other's views.

A boss needs somebody he can turn to for help in solving problems, or even to relieve tension by talking about baseball or fishing. The associate should be more than a stooge like Sherlock Holmes' Dr. Watson or Don Quixote's Sancho Panza. But Old Sancho did express a few gems of homespun wisdom.

There is need for fellowship in business. As the *Old Farmer's Almanac* says:

"It's pure joy to be one of a pair pulling on a saw on a frosty morning."

That probably won't mean anything to you city slickers. And I believe most farmers now have power saws.

Carman Fish

PLANT PARKING LOTS AND PUBLIC LOADING POINTS

**Published by National Safety Council
425 North Michigan Avenue, Chicago 11**

1. This data sheet discusses the hazards found in industrial parking lots and at bus and streetcar loading points, and suggests methods of preventing accidents at these locations.

2. Personal injury may be incurred in plant parking lots in numerous ways. Employees may be struck by automobiles or may suffer injury while riding in cars that collide. They may slip and fall because walkways are defective or covered with ice or snow, because illumination at night is inadequate, or because they are running in the parking area.

3. At loading and unloading points of buses and streetcars, personnel may be struck by a bus, streetcar, or private vehicle. Employees may slip or fall while they are running to or from a streetcar or bus or, because of crowded conditions, while they are entering or leaving a streetcar or bus. They may suffer injury when boarding or alighting from a streetcar or bus in motion or when running in front of a streetcar or bus after alighting.

4. The ultimate goal is to facilitate the movement of pedestrians and vehicles in a safe, convenient, and efficient manner. In order to achieve this goal, present and potential hazards must be eliminated or controlled.

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable procedure is necessarily included. Data Sheets should not be confused with American Standard Safety Codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

5. Each plant must analyze its own problem for the best possible solution, but there are certain general rules which will serve as a guide in drawing up an accident prevention program for plant parking lots and public loading points.

Plant Parking Lots

6. Most plants have found it necessary to provide off-street parking facilities for their employees. Where parking lots are provided or are to be provided, the points discussed in the following paragraphs should be considered.

Location

7. The best location for a plant parking lot is a completely fenced-in area inside the plant grounds and away from major streets. The area selected should be free of the possibility of damage to the finish of cars by noxious fumes, gases, or vapors released from smokestacks

or exhaust vents. Attention must also be paid to the fire hazard created by large numbers of cars in a concentrated area.

8. The next best choice for a parking lot location is a fenced enclosure some distance away from the plant but close enough to it for easy walking. Lots should be located so that, as far as possible, workers do not have to cross principal thoroughfares on their way to and from the plant.

9. If a parking lot is so located that employees must cross a principal street, a study should be undertaken in cooperation with the local traffic engineer, engineering department, or police department to determine whether or not additional protection is needed for pedestrians crossing the street.

Layout

10. All plans for new parking lots, with driveways noted, and plans for changes in driveways or for new driveway openings in existing parking lots should be submitted prior to construction to the city or state traffic engineer or engineering department for approval.

11. Parking lots, aisles, and stalls should be designed for maximum safety and efficiency within the lots themselves, and also in terms of the movement of vehicu-

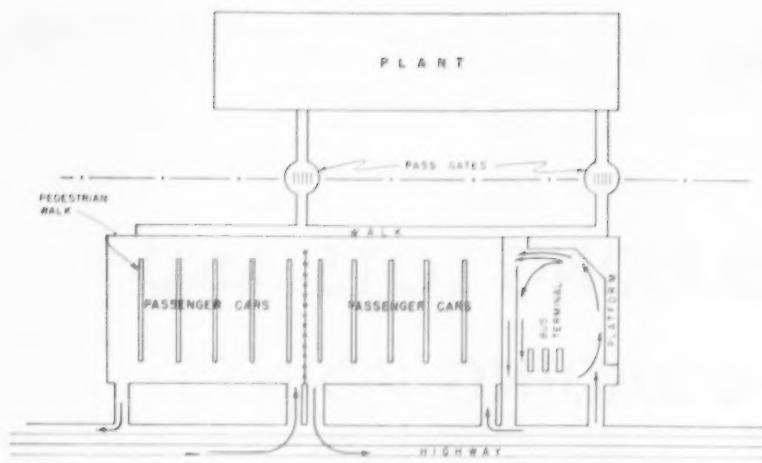


FIGURE 1. Typical layout of parking lot and bus terminal.

lar traffic on adjacent streets. (See Figures 1 and 2.) Some plants have found it advantageous to employ traffic engineering consultants to design parking lot facilities.

12. Parking stalls should be assigned to employees according to their points of origin and destinations, to reduce vehicular conflicts.

Driveways

13. All driveway openings should be large enough (a minimum width of 26 feet) to allow two-way traffic to move safely through them. View obstructions should be kept to an absolute minimum at entrances and exits of the parking lot. Driveways should be located on minor streets wherever possible.

14. Reservoir space should be provided off the street for vehicles awaiting parking stalls. If reservoir space is not sufficient, vehicles will back up onto the surrounding streets, causing congestion and increasing the hazards. Reservoir space can also be used to accommodate those automobiles that do not proceed to a stall, but merely stop to discharge or pick up employees.

Surface

15. The entire parking lot should be paved with an all-weather surface. The surface should be maintained in good condition to prevent slips and falls of employees walking to and from their cars. In

winter, snow should be removed as soon as possible, particularly prior to major-shift arrivals. Should ice form on the surface of the parking lot, the use of sand and rock salt will serve to reduce slips and falls.

Signs and Markings

16. Signs and pavement marking should be used wherever needed to instruct pedestrians and motorists using the parking lot in the correct procedure to follow.

17. All signs and pavement markings should be well maintained. Wherever a large area is covered by a parking lot, a sign indicating the aisle number should be provided at each aisle so that the employee can note the location at which he has parked his vehicle. These signs should be placed high enough to be seen over the tops of the vehicles and should be legible from a considerable distance.

18. A traffic pattern should be established wherever possible by means of signs or pavement markings. Signals may be necessary to alternate use of main lot roading within the parking lot.

19. All parking stalls should be marked on the surface of the parking lot.

Lighting

20. Good illumination should be provided if the parking lot is to be used after dark. Five-tenths foot-

candle per square foot at a height of 36 inches is a value recommended.

21. The name of the plant parking lot, entrance signs, and exit signs should be illuminated if the parking lot is to be used at night.

General

22. Watchman service is recommended to prevent thefts and tampering with cars.

23. Employees should not be permitted to loiter about the parking area or in parked cars.

24. A pass system should be adopted to make it impossible for an employee to enter the parking area during his regular shift without authorization.

25. For identification, a small but easily recognized sticker or identification plate may be attached to each car.

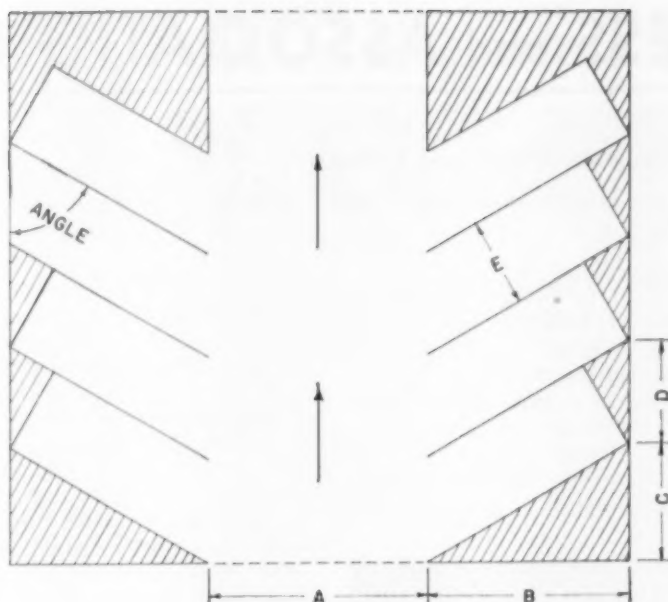
26. The regular plant fire company should be trained to extinguish automobile fires. Also, first-aid and fire fighting equipment should be provided in the lot.

27. Employees who are involved in accidents in the parking area should be required to submit detailed reports to the company.

28. In addition to the above recommendations, plants invariably find it necessary to incorporate other rules to meet local situations. Some companies, for example, encourage employees to have mechanical inspections of their cars made at regular intervals. These inspections should include steering, brakes, headlights, tires, and windshield wipers.

29. Some companies print and distribute cards listing procedures for employees using company parking facilities. Such a card may include the following points to be agreed to by each employee:

- a. I agree that my car may be inspected at the gate and that any bundle or package which I may be carrying, and for which I do not have an exit pass, may be inspected by an authorized company watchman.
- b. I will not enter the parking lot between the regular starting time and



THESE MEASUREMENTS PROVIDE ADEQUATE SPACE FOR PARKING AND MANEUVERING. A COMBINATION OF TYPES MAY BE USED ON IRREGULAR SHAPED LOTS IF PARKING STALLS ARE CLEARLY MARKED AND AISLE SPACE "A" IS ADEQUATE FOR PARKING ANGLE OF LARGEST DEGREE.

ANGLE OF PARKING	SQUARE FEET PER CAR	"A"	"B"	"C"	"D"	"E"
30°	341.6	12.5	15.1	16.5	16	8
45°	274.4	12.5	18	13.2	11.3	8
60°	278.4	21	19.7	9	9.2	8
90°	252.4	25	19	—	8	8
Parallel	297	11	8	—	22	8

FIGURE 2. Measurements for aisle and stalls of parking lot.

quitting time of my shift, except on special authorization of company official, Mr. _____.

- c. I will immediately report any accident involving my automobile which occurs on company premises.
- d. I will lock my car when leaving it in the parking lot.
- e. I hereby sign this card, and fill in the license number of my car, the motor number, the make, model, year, and color. I understand this information will be kept on file in the company office.

Public Loading Points

30. It is particularly difficult to control hazards and accidents at loading and unloading points for buses and streetcars, since many of these accidents occur off company property. Many plants have found, however, that city officials and transportation companies are eager to cooperate in any plan to eliminate accidents.

31. A large plant can often ob-

tain city police protection to aid employees in crossing to and from public vehicles. Special plant policemen are sometimes assigned to dangerous corners.

32. It may be advisable to request the transit company to arrange a schedule which will best accommodate rush hour traffic to and from the plant. Transit companies are glad to cooperate since such an arrangement means that their equipment will operate with full loads and at maximum efficiency.

33. Off-street bus and streetcar terminals are recommended. (See Figure 1.) Loading islands and separation of buses and streetcars from private vehicles should be established wherever feasible.

34. Passengers of public conveyances should be asked to form

a line when loading on buses and streetcars. This process will expedite loading and reduce confusion and hazards.

35. Signal lights may be necessary at loading and unloading points to control the flow of motor vehicle traffic. However, city authorities should be consulted before any action to provide such signals is taken. Some companies have shared with the city the cost of installation and maintenance of such traffic signals.

36. Employees should be educated to cross streets only at intersections or marked crosswalks, to obey traffic signals, and to avoid crowding and rushing while entering buses and trolleys. In some companies, large signs are placed at the entrance gates of the plant, calling attention to these precautions. In other plants, instruction cards listing the safety rules to be observed by employees when entering and leaving the plant are distributed.

37. In cooperation with local traffic control groups, the company should arrange for staggered starting and stopping times for shifts, to minimize congestion. Such scheduling prevents not only the choking of arterial and feeder highways with motor vehicle traffic from plants, but also the overburdening of public transportation facilities, (buses, streetcars, trains). When the load on highways and transportation systems from the plants is leveled, employees can reach their homes more quickly and safely.

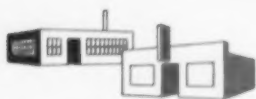
REFERENCE

Traffic Engineering Handbook, 2d Ed., 514 pp., Institute of Traffic Engineers, National Society of Professional Engineers Building, 2029 K Street, N. W., Washington, D. C. (1950).

ACKNOWLEDGMENT

This data sheet was revised by Harry Porter, Jr., and Fred Potenza, Traffic and Transportation Department, National Safety Council. It has been extensively reviewed by members of the National Safety Council and representatives of chapters of the American Society of Safety Engineers. It has been approved for publication by the Publications Committee of the Industrial Conference of the National Safety Council.

SMALL BUSINESS and ASSOCIATIONS



By A. M. Baltzer and John T. Curry

Small Business Program Staff, National Safety Council

Associations in NSC Sections?

"Are trade associations eligible for membership in our section?" Several section officers have asked that question and the answer is a definite "Yes!"

While trade associations pay a flat membership dues of \$75 they may enroll in the section of their choice and they are considered members of that section; i.e., there is no such thing as a special section for associations.

What does this mean to your section? Well, for one thing, it means that your section should encourage its associations to step up their safety activities; if membership in the Council (meaning your section) would help, so much the better.

Equally important is the opportunity to use key association representatives on your Section Executive Committee. They speak for important segments of your industry and can keep you in closer touch with the smaller firms who heretofore may have been out of reach.

New How-to-Do-Its

Our "Association Safety Guides" might be called administrative data sheets for the association executive as they include summaries of safety activities that have proved successful for associations.

The first "Guide," launched with our March-April issue of the *Associations News Letter*, was on the subject of "Why We (as an association) Got Started." Number two, logically, was "How We Got Started." In each of our bi-monthly *Associations News Letter* issues there will be another "Guide" for the 1,000 associations on our complimentary mailing list.

If you want to be sure that your association is on the list just write to NSC Small Business Program.

Concrete Evidence

The Portland Cement Association would be the last to object to our use of a pun to compliment their safety success.

Their latest *Accident Prevention Magazine*, the cover of which appears here, is crammed with



solid, concrete evidence that an association-inspired program gets results.

The 1956 score is all the more impressive in the light of the cumulative figures: 1,212 plant-calendar years of disabling injury-free operation; 166 plants received trophies for an injury-free year's production during the past 33 years! One plant scored an amazing 11 years of consecutive injury-free performance and received its 21st award!

Submit Statistics to NSC

The Asphalt Roofing Industry Bureau's safety committee recently sent member plants copies of the NSC standard form for reporting industrial injuries. The

forms are to be completed and sent directly to the Statistics Division of the National Safety Council for analysis and inclusion in the Council's statistical handbook, *Accident Facts*.

A number of associations do likewise or compile their own statistics and submit them to the Council in finished form. Other associations use the Council's help in preparing special questionnaires to determine the extent of safety activity, accident losses or comparative standing with other industries.

All associations are invited to arrange for the collection of statistical information. The Council will be happy to work out the details so that the resources of the association and the Council are used to the best advantage and so that the maximum amount of benefit is achieved with a minimum of effort.

Safety Cuts Losses

A sheet metal fabricating plant with about 100 production employees has submitted figures on insurance costs before and after the start of a safety program. Here's the comparison:

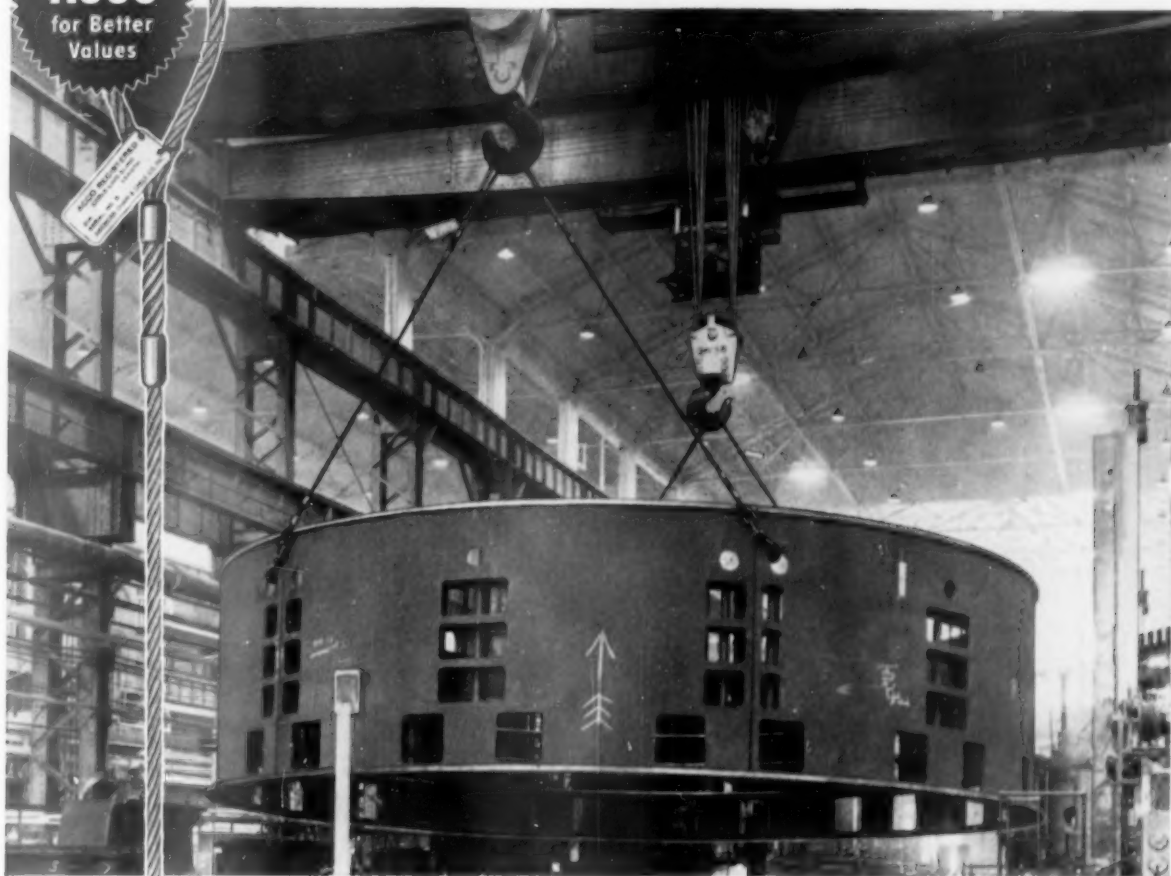
Before the start of the program losses averaged more than *four cents per hour* during a 10-year period of time.

During the following seven years, with greater employment and with a safety program, losses were less than *two cents per man-hour*.

The secret? Sincere and active participation by the three top executives (the firm has no professionally-trained safety man), enthusiastic employee participation and a continuous program to remove hazards and to maintain the interest of employees. All simple but very effective activities.

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for Better
Values

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Your Most Important Production Operation

...may be lifting your finished product, or a major assembly. A dropped load can result in serious losses from wasted materials and labor...damaged production equipment...disrupted delivery schedules.

The man in your plant in charge of lifting operations has a heavy responsibility. It is good management to provide him with the best possible tools for his job.

The slings he uses are vitally important. The safest slings made are ACCO Registered Wire Rope Slings. Each is precision made and pre-tested at twice its working load before leaving the factory.

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FREE FOLDER • Write Wilkes-Barre office for your copy of new Folder DH-532, which gives strengths and weights (for six different lifts) on a full size range of ACCO Registered Cable-Laid Slings.

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- 1 The best material
- 2 Unit safety factor (on bodies, rings, links, hooks)
- 3 Proof test of complete sling to twice the working load limit
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- 5 Metal identification tag on each sling
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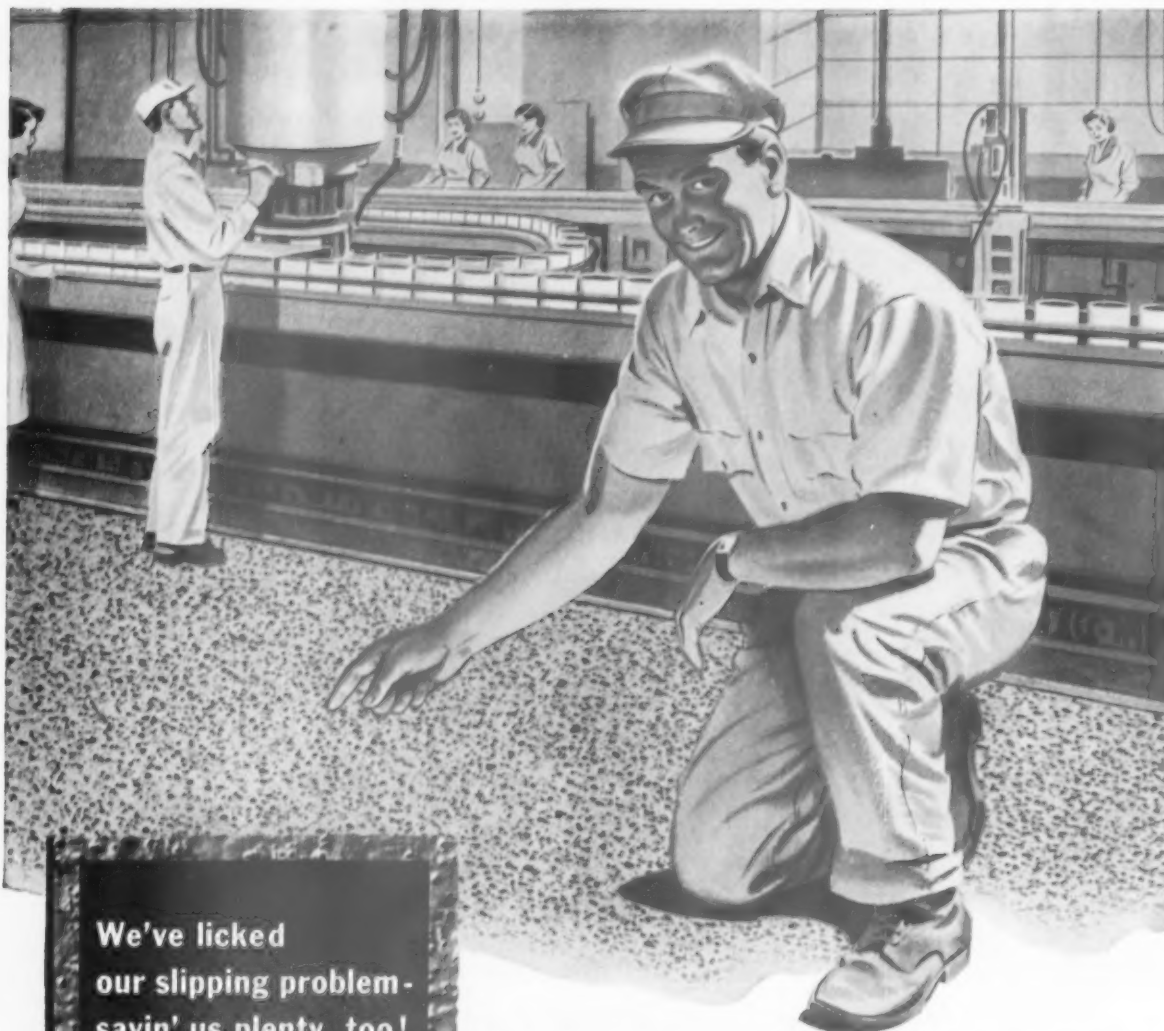


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savin' us plenty, too!**

He's talking about ALGRIP—A.W. ALGRIP—the world's only abrasive rolled steel floor plate that provides super-safe footing under the most hazardous slipping conditions—on flat or inclined surfaces.

ALGRIP licks slipping and skidding hazards thoroughly by providing thousands of abrasive traction particles at every step. It's made by a patented process in which a grinding-wheel type of abrasive is rolled—not coated—to a controlled depth as an integral part of tough steel plate. Usage merely exposes more abrasive.

Look around for slipping hazards and make a test installation in your worst area. It'll save you plenty, too, as accident and insurance rates go down. Use it as an overlay or as independent flooring. ALGRIP fabricates easily and requires no maintenance.

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ALGRIP—approved for safety by Underwriters' Laboratories

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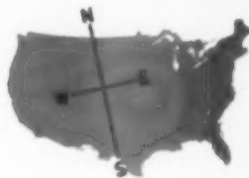
A.W. SUPER-DIAMOND economy rolled steel floor plate—Plates—Hot and cold rolled sheet and strip—(Alloy and Special Grades)



Circle Item No. 52—Reader Service Card

National Safety News, July, 1957

AROUND THE COMPASS



ACTIVITIES • PROGRAMS • EVENTS

Compiled by Field Service Department, NSC

Lehigh Valley Challenges Businessmen

A challenging invitation to businessmen was issued by the Lehigh Valley Safety Council to attend its mercantile and small business safety meeting. The invitation, printed on one side of a single sheet, asked, "Are you doing business in the old-fashioned way?" "Do you let your competitors beat you to the punch because their costs are less?" The announcement invited businessmen to come and learn the costs of accidents and how they can be reduced. The film, *Safety Doesn't Happen*, was shown. J. A. Kirchgassner, safety director for Metropolitan Edison Company, presided.

Spring Safety Sale

"With Bargains Galore—!

"Be A Safety Bargain Hunter!"

The Greater Minneapolis Safety Council used such slogans usually found on sale bills to announce the "Spring Safety Sale" program, held by its Women's Division. Speakers included a woman bus driver, an eye surgeon, and a policewoman. The approach to the meeting was so unique that a Chicago newspaper ran pictures taken at the session.

Northwest Industrial Safety Conference

The Seattle-King County Safety Council is hard at work preparing for the Northwest Industrial Safety Conference to be held in Seattle Nov. 7-8. The conference will cover many phases of industrial safety, including off-the-job safety. With the cooperation of the local chapter of ASSE, the Federal Safety Council, and the State of Washington Department of Safety, the Council expects this

conference, covering Washington, Oregon, Idaho, and British Columbia, to be the largest ever held in the Pacific Northwest.

San Francisco Quake Shakes Elevators

The California Division of Industrial Safety discovered six cases where recent earth tremors at San Francisco had shaken elevator counterweights loose from their guard rails. These weights weigh from 2,500 to 3,500 pounds. In two cases they struck elevator cabs, but no injuries resulted.

Mrs. Tolbert Named

Mrs. Gladys Tolbert has been appointed manager of the Sacramento Safety Council. She has been acting manager since the recent retirement of Frank Enos.

Twin Cities Completes Foremen's Course

A comprehensive, 20-hour safety course for foremen recently was completed by the Industrial Division of the Twin Cities Area Safety Council for the Management Training Committee of St. Joseph and Benton Harbor, Mich. Harry Hatcher, Council director, says the success of the course has resulted in its being considered as an annual affair.

High Hazard Industries

In an effort to reduce the frequency and severity of accidents in high hazard industries, a series of conferences will be held in various cities in cooperation with trade associations and, wherever possible, local safety councils.

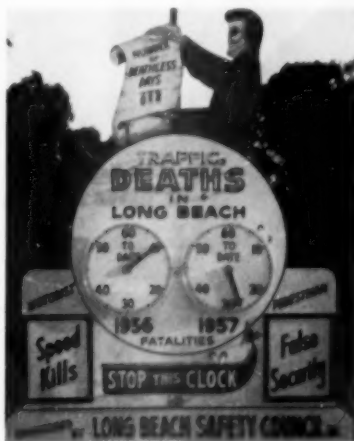
The first of these was held in Washington, D. C., on June 11, followed by one in New York City, June 24.

A. M. Baltzer, director, Small Business and Associations, NSC, discussed the Council's survey of high hazard industries. Other conferences are scheduled to follow the Washington and New York meetings.

Occupational Safety Inventory

Questionnaires were mailed last month from NSC headquarters to all state and local safety councils covering their occupational safety activities. This inventory, augmented by additional inventories to cover the work of other community organizations, is expected to provide a wealth of data for the President's Conference on Occupational Safety.

Returns are now being received with reports in from Fort Wayne, Kalamazoo, Kansas City, Lehigh Valley, Minneapolis, New York



TRAFFIC FATALITIES are recorded on this display sponsored by the Long Beach (Calif.) Safety Council. A Green Cross flag flies from a pole at the top, is put at half-mast on days when traffic deaths occur. The record is kept up to date by Officer William Meyer, Public Relations Division, Long Beach Police Department, and James A. Worsham, Council manager.

Industrial Gloves... made to fit the job



No matter what the job, there's a Hood Industrial Glove that fits it perfectly. The style, shape, materials and treatment of every Hood Glove are determined by the requirements of a *specific kind of work*. That's why it's important to specify "Hood"—the glove that's "tailor-made" for the job.

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RUBBER • NEOPRENE • PLASTIC COATED INDUSTRIAL GLOVES

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City, Racine, St. Louis, Sioux City, Syracuse, and Toledo safety councils.

Previous Presidential conferences have affirmed the need for state and local safety councils to conduct organized occupational safety programs. The planning committee hopes that the 1958 Conference will be able to pinpoint what these programs should be. The inventory of what is now being done was considered to be an essential prerequisite to the development of improved program standards for local organizations.

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Philip N. Streit, 504 S. 11th St., Adel, Iowa. Phone: 147LW. (Ill., Iowa, S.D., N.D.)



"I think there's a short somewhere. Business has been better than that."

National Safety News, July, 1957



B R E C K

p H 7 P R O T E C T I V E C R E A M

Breck pH7 Protective Cream covers the skin with an invisible, oil-resistant film which is neither slippery nor sticky. This neutral film prevents contact of irritants with the skin. Breck pH7 Protective Cream is effective against such irritants as lubricating oils, grease, aromatic and hydrocarbon solvents, cutting compounds, synthetic resins, rubber dust, fiber glass, paint, duplicating inks and iron dust. Breck pH7 Protective Cream is easily removed with Breck Hand Cleaner or with soap and water, making the use of harsh cleansers unnecessary.

A Breck Industrial Preparations Booklet will be forwarded to you upon request.

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NEW YORK • CHICAGO • SAN FRANCISCO • OTTAWA, CANADA

Circle Item No. 85—Reader Service Card

IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

New Name, New Ideas

As you can see, we've made a change in Sammy Safety's Notebook. We have opened it up, so to speak, and given it a new name.

Effective immediately, we will publish promotional ideas, publicity stunts, showmanship or exhibit ideas, as well as safety devices, guards and gimmicks. We'll accept them from any source, whether submitted specifically to the department or not, although we hope this change will result in more contributions to this department.

The same prizes as in the past will be awarded to the winning idea each month.



Four-Way Stop Sign Guides Plant Traffic

HOMEMADE STOP SIGNS are helping to make in-plant traffic safer for Arvin Industries, Inc., Franklin, Ind.

The company made them by cutting out two standard stop signs and splitting each half way, then sliding them together. The signs are painted yellow with black lettering. It is impossible to approach one from any angle without seeing the word, "Stop."

The plant's safety director is R. D. (Pat) Patterson. This idea was submitted by Gardiner M. Cain, Cain Safety Service, Indianapolis, Ind.

* * *

Power Press Die Code

This sign is a safety code for power press dies used by the Kansas City Division of the Bendix Aviation Corporation. The sign is 16 x 20 in., black letters on white background with the green cross for safety in the center. This code was a cooperative project by all persons concerned and is accepted both by supervisors and press operators. It enables supervisors, set-up men, and press operators to determine the approved safety requirement for any die.

Each die is coded at the time it is tried out and approved. The letters and numbers are stamped on the front edge of the die shoe and the impressions filled with yellow paint. With these signs located around the press room, and the code for each die plainly

BE SAFE

OPERATE YOUR PRESS ACCORDING TO INSTRUCTIONS

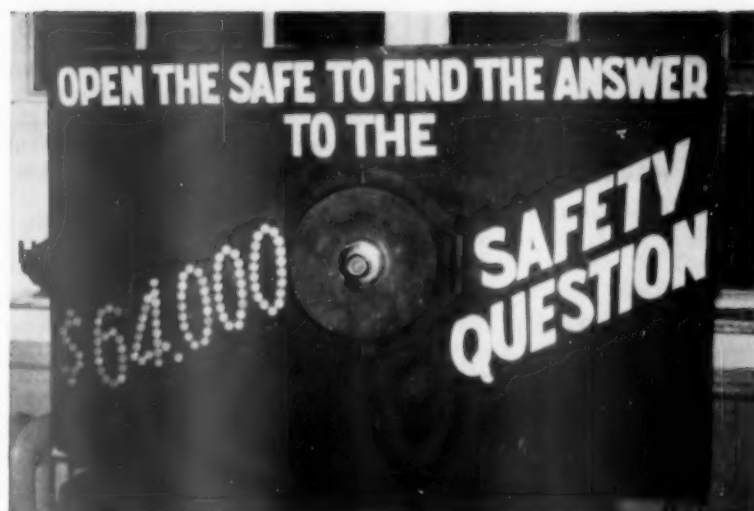
EACH DIE IS STAMPED WITH AN OPERATING CODE YOU MUST USE THE TOOLS & METHOD PRESCRIBED

- B.F. - BARRIER GUARD & FOOT CONTROL.
- B.F.D. - BARRIER GUARD - FOOT CONTROL - REMOVAL DEVICE.
- 2.H. - 2 HAND CONTROL.
- 2.H.D. - 2 HAND CONTROL - REMOVAL DEVICE.
- P.R. - PULL-BACK RIGHTHAND.
- P.L. - PULL-BACK LEFTHAND.
- P.R.L. - PULL-BACK RIGHT & LEFT HANDS.
- L.C. - LIGHT CURTAIN.
- A.E. - AIR EJECTION.

**SAFETY GLASSES
MUST BE WORN AT ALL TIMES**

stamped, it is a simple matter to check any press operation at any time. Everyone concerned feels

it has increased both safety and efficiency of this plant's power press operations.



\$64,000 Question

Curiosity is a wonderful human trait. Like a "wet paint" sign, this \$64,000 Safety Question idea is certain to get positive and frequent reaction.

Harvey H. Marsden, plant safety director for the Kellogg Co., Battle Creek, Mich., took a tip from the fabulous TV quiz shows and built a simulated wall safe, using a box for the safe. The

\$64,000 on the front panel consists of 102 dimes, which Mr. Marsden countersunk in the front panel and prudently covered with a sheet of transparent plastic.

The box was hung in the factory lobby, through which 90 per cent of the Kellogg employees pass each day. Many employees stopped, opened the safe, and gazed upon their own reflection in a mirror.

Gasoline Engine Crank Holder

Cranking a gasoline engine can result in a painful injury if the crank slips. A slipping crank prompted the crank holder shown here. The holder is steel plate welded at the corner and to the frame of the engine, and a stiffener is welded in the center of the angle. The sleeve is a section of pipe, also welded to the vertical member of the holder. It was



necessary to lengthen the shaft of the crank. Submitted by W. A. Viebrock, Lehigh Portland Cement Co., Iola, Kan.

Girl, 15, Wins Paper Company's Safety Contest

A FRECKLED-FACED 15-year-old daughter of an employee won a

\$50 cash prize in a monthly safety cartoon contest sponsored by the company magazine of a Canadian pulp and paper firm.

Maureen Evans, who plans to use the money on a trip to Holland, detected all of the unsafe acts and conditions in a National Safety Council "What's Wrong With This Picture?" cartoon published in *Triangle*, the employee publication of Powell River Company, Ltd., Powell River, B. C.

The cartoon, one of a series offered free by the Council, has been used by employee magazines and newspapers throughout the United States and Canada. Many



MAUREEN EVANS, winner of the Powell River Company's first safety cartoon quiz, will save her \$50 prize for a tour of Holland with her high school band.

publications are offering prizes for finding the largest number of unsafe or careless acts or conditions in the cartoons. Even without a contest, or a prize, editors find that the cartoons encourage interest in safety.

PRIZES FOR IDEAS

Do you have an idea, gadget or home-grown invention that is preventing accidents in your plant or operation? Why not share it with others, and perhaps win valuable prizes, too? Send a brief description with a photo or drawing (we'll make a finished one from your rough) to Ideas That Worked, National Safety Council, 425 N. Michigan Ave., Chicago 11.

For the best idea each month, we will award \$15 worth of merchandise of your choice from our Incentive Catalog, or a personalized copy of the *Accident Prevention Manual* with your name stamped in gold on the cover. Prizes totaling \$25 will go every six months to the best of the monthly winners.

OFF THE JOB

Safety programs for plant and community

By HARRY C. JOHNSON

NSC Staff Representative, OTJ Safety Committee

Protecting Kids From Blasting Caps

During the coming school term a concentrated effort will be made through parents, teachers, loggers, miners, farmers and construction workers to help prevent accidents caused by explosives. These people will be called upon to devise safe methods for storing blasting caps and other explosives, which have claimed many young victims when children found this type of danger lying about.

The following article will appear in many periodicals this summer to alert readers to caution children of dangers of blasting caps. This effort is being sponsored by the Institute of Makers of Explosives, 250 E. 43rd St., New York 17.

Don't Blast 'Em

Constant vigilance and observance of recognized safe practices in the use and storage of explosives are prime requisites if injuries from this source are to be avoided.

Inadequate storage facilities and negligence in return of unused dynamite and detonators to proper storage have resulted in such dangerous materials falling into the possession of the inexperienced, too often with disastrous results. Blasting caps are the chief source of such accidents, as witness the many deaths and maimings that occur every year when blasting caps get into the hands of children.

To combat this situation the Institute of Makers of Explosives has a campaign under way to teach children to recognize the various blasting caps and to leave them alone if found.

A display board of dummy caps and an accompanying study-discussion sheet for use in child education has been made available

in a kit which includes posters for explosives users. It is suggested and strongly recommended that each user of explosives obtain enough kits to distribute one to each school and youth group in the work area and urge the teachers and leaders to teach the children in their care the safe procedure if any blasting caps are found. Address your request for the kits to the Institute of Makers of Explosives.

You, too, who have the responsibility for safety in your job, can be alert to this danger. Check your own industry for safe handling and storage of explosives and help groups of educators in warning of this hazard.

Wisconsin Board of Health Promotes O-T-J Safety

Among the many organizations which are adding momentum to the off-the-job accident prevention program is Wisconsin's State Board of Health. The Board is distributing to industrial workers a



pamphlet, *Safety Pays at Home, Too*.

Pointing out that in the state in one year 491 deaths were caused by home accidents as compared to 170 deaths by industrial accidents, the pamphlet offers these suggestions for home safety:

- Repair all broken and faulty equipment immediately.
- Take care not to overload electrical circuits.
- Replace tools after using them.
- Keep yard, garage, and house litter-free.
- Use ladders. Don't stand on wobbly boxes or similar makeshifts.
- Pace yourself in your household chores and take frequent breaks. Fatigue causes accidents.
- Store all dangerous household items properly (tools, poisons, matches).
- Seek out and get rid of fire hazards such as rubbish in attic and basement and bundles of oily rags.
- Eliminate skid hazards on floors and rugs.

Urges Eye Safety Programs for School Shops

EYE HAZARDS "as great as those in industrial plants" are threatening the vision of hundreds of thousands of youngsters in the nation's schools, says an official of the National Society for the Prevention of Blindness.

James E. O'Neil, the organization's director of industrial service, reports that there is an urgent need for eye protection programs in vocational and industrial arts shop classrooms, and in chemistry laboratories. He recommended to delegates attending the school session of the Greater New York Safety Convention that students, teachers and visitors be required to wear safety eyewear "throughout their stay in school shops and chemistry labs."

Charging that "far too few schools have instituted adequate eye safety programs," Mr. O'Neil attributed their "inaction" to the "erroneous impression that lack of production pressure lessens the need for personal protective equipment." Evidence to the con-

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British Safety Leader To Address 45th Congress

A LEADER of the safety movement in Great Britain and a woman telephone company executive from Brooklyn will be the featured speakers at the Annual Meeting, Monday, October 21, as the 45th National Safety Congress and Exposition gets under way in Chicago.

Setting the Congress theme, "Back the Attack on Accidents," will be Maj. Gen. B. K. Young, director-general, The Royal Society for the Prevention of Accidents. He will be returning the visit of NSC President Ned H. Dearborn, who was the principal speaker at the opening meeting

of the British society's National Safety Congress in London last October.

Mrs. Gertrude H. Frese, assistant to the vice-president and general manager, New York Telephone Company, will speak on "Women in Industry." Holder of the highest ranking job of any woman in the telephone industry, Mrs. Frese is well acquainted with safety through her personnel duties among her company's 86,000 employees (two-thirds of whom are women).

Six hotels — Conrad Hilton, Blackstone, Congress, LaSalle,

DATE AND HOTEL ASSIGNMENTS

	(Hotel)	Oct. 21 Monday AM PM	Oct. 22 Tuesday AM PM	Oct. 23 Wednesday AM PM	Oct. 24 Thursday AM PM	Oct. 25 Friday AM
Sectional Sessions						
Aeronautical Ind.	Hilton	X	X	X		
Air Transport	Hilton			X		
Auto. & Mach. Shop	Congress			X	X-jt.	
Cement & Quarry	Hilton		X	X		
Chemical	La Salle	X	X	X	X-8	
Coal Mining	Hilton	X	LX	X		
Commercial Vehicle	La Salle		X	X	X-jt.	L-jt.
Construction	Hilton	X	X			
Electrical Equipment	Hilton			X	X	
Fertilizer	La Salle	X	LX			
Food	Morrison	X8	X	LX	X	
Glass & Ceramics	Hilton	X	X			
Marine	Morrison		X	X	B	LX
Meat Packing—Tng. & L.	Congress	X	LX			
Metals	Hilton	X	X2	L		X2
Mining	Congress	X	LX	X		X
Occ. Health Nursing	Hilton		X	X		L
Petroleum	Hilton	X	X2	X2		X
Power Press	Congress		X		X-jt.	
Printing & Publishing	Hilton			X	X	
Public Employee	Hilton	X	X	X		X
Public Utilities	Hilton		X			X3
Pulp & Paper	Hilton	X	X	X5	LX3 (1 jt.)	
Railroad	Morrison		X	X		X
Rubber	Hilton	X	LX			
Textile	Hilton	X	X			
Trades & Services	Morrison	X3	X			
Traffic	Congress	X	X	X	X	X
Transit	La Salle		X	X	X-jt.	L-jt.
Wood Products	Hilton	X	X	X		X-jt.
Divisional Sessions						
Farm	Hamilton	X	X	X	X	X
Home	Hilton	XEve.		X	X	
Labor	Hilton		X	X	X	
School & College	Morrison	X	X	X	X	XL
Women's Activities	Blackstone	X	X			
A.S.S.E.—Subject Sessions						
A.S.S.E. Ann. Mtg.	Hilton		X	L		
Subject Sessions	Hilton, Congress & La Salle			X	X	X
General Sessions						
Annual Council Mtg.	Hilton	X				
Banquet	Hilton		X	X	Eve.X	
Early Morn. Sess.	Hilton				X	X

X One session; X3 Three group sessions; L Luncheon; X-jt. Joint session, two or more sections; B Breakfast meeting

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all-weather
sanitary, tamper-proof
"throw-away" dispensers

of high impact styrene plastic



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2 sizes,
500
Tablets
1000
Tablets

Easily
Put Up
INDOORS
OUTDOORS

"pep-Up"
The Original and Highest Quality
IMPREGNATED SALT TABLETS

• combat
heat fatigue

• help employees
feel good and
retain their vigor

• hold down
hot weather
accident rates

Impregnated to Prevent "Salt Sickness".
Each salt crystal individually coated to
give slow, controlled dissolving, to pro-
long benefits and eliminate nausea.

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FOR EVERY NEED**

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New all-plastic dispensers all in
increase in price

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500 Tablets in Expendable Dispenser	1114
1000 Tablets in Expendable Dispenser	1124
1500 Tablets in Bulk Carton	1133
Carton, 72 "Vest Pocket" packets of 10 tablets each	1101

UNITED STATES SAFETY SERVICE CO.

Div. A-7, 1215 McGee St., Kansas City, Mo.
Branches in Principal Industrial Cities
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Circle Item No. 56—Reader Service Card

Hamilton, and Morrison — will provide meeting rooms for the 300 sessions at safety's biggest show. About 12,000 convention visitors will hear some 700 speakers — many of them foremost experts in their fields — talk on every phase of accident prevention.

Programs so far announced include some inspirational sessions with a prominent early morning speaker and a varied array of talented speakers on industrial safety.

Early Morning Sessions. Speaker at the popular early morning sessions will be J. L. Rosenstein, assistant director, The Management Center, Marquette University. His topic will be "Human Relations and Man — Management."

These early morning talks, Tuesday through Friday, are adapted from Dr. Rosenstein's famous one-day course, which has been presented by almost every chapter of the National Safety Council and the American Society of Safety Engineers in the United States and Canada.

Dr. Rosenstein is well known to Council members for his series, "Human Side of Safety," which was published by the Council, and for his work with six NSC films, "Human Factors in Supervision."

Formerly a member of the faculties of Loyola University, Chicago, and the University of Miami, Coral Gables, Fla., Dr. Rosenstein is noted for his work as consulting psychologist, as a lecturer, and as the author of two books — *Psychology of Human Relations for Executives* and *The Scientific Selection of Salesmen*.

ASSE Subject Sessions. The American Society of Safety Engineers has scheduled 13 subject sessions on topics of practical interest. Three of them comprise a series on accident prevention fundamentals which will have special appeal to experienced safety men seeking a refresher course, to delegates recently placed in charge of accident prevention in large or small establishments, and to those attending the Congress to learn the essentials of the profession.

Three morning sessions beginning Wednesday, October 23, will cover these phases: "Fact Finding Procedures," "Environment," and "The Employee — His Education and Training." Topics include records and how to use them, investigating accidents, inspection programs, guarding machine tools, plant construction and maintenance, housekeeping and material handling, initiating and maintaining interest, job safety analysis, employee placement, and safety education and training.

The series was arranged by Robert Clair, assistant vice-president, Liberty Mutual Insurance Company, Boston. Presiding over the three sessions will be Myron L. Miller, supervisor of safety, Westinghouse Electric Corporation, Pittsburgh, Pa.; John C. Sewell, safety and workmen's compensation manager, Wright Aeronautical Division, Curtiss-Wright Corporation, Wood Ridge, N. J., and Eugene Stuffing, safety director, Carrier Corporation, Syracuse, N. Y.

Other ASSE subject sessions will include such topics as vision in industry, low voltage hazards, small business programs, visual aids, noise control, off-the-job safety, and traffic accidents and their relation to industrial safety. Cosponsoring various sessions will be the Industrial Conference of the National Safety Council, the Council on Industrial Health of the American Medical Association, the Electrical Equipment and Occupational Health Nursing Sections of NSC, the American Society for Testing Materials, and the American Material Handling Society.

Pulp and Paper Section. At a luncheon on Thursday, October 24, Dr. Bruce Young, director, Rehabilitation Center of Ontario, Toronto, will speak on rehabilitation.

Public Utilities Section. "Hazards in Working 345,000 Volts Hot" will be the subject of a talk Thursday, October 24, by W. P. Carter, superintendent of transmission, Appalachian Electric Power Company, Bluefield, Va. This will be a visual demonstration.

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Now-safer safety shoes

**"QUILON" helps safety shoes resist acids,
alkalies . . . protects against water and perspiration**

Du Pont "Quilon" chrome complex combines with the leather fibers to give you safety shoes that resist perspiration, strong acids and alkalies . . . protect against damage caused by repeated wetting and drying. Yet the leather breathes!

Extensive laboratory and wear tests

show that leathers properly processed with "Quilon" result in *safer* safety shoes. That's why many leading manufacturers are now featuring safety shoes with the lasting protection of new, versatile "Quilon". Look and ask for these safer, more practical shoes . . . right now!

QUILON[®]

Makes good leather perform better



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BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

• Du Pont supplies "Quilon" only to tanners, does not make leather or shoes.



Safer Safety Shoes by

Thom McAn

SAFETY SHOE DIVISION

S 4135 Insulated Boot. Fully insulated against heat and cold. All leather-lined. Cushioned insole. Storm welt. Lightweight neoprene Cork-Grip heel and sole. Sizes: D—EE, 6—13.

E. I. DU PONT DE NEMOURS & CO. (INC.), GRASSELLI CHEMICALS DEPARTMENT, WILMINGTON 98, DELAWARE



From Kitchen To Consumer

**Avro Aircraft speeds up in-plant
food service; keeps employees
well fed at much lower cost**

← **FROM** the central kitchen at
Avro Aircraft Limited . . .



Wholesome, appetizing meals are carried in vacuum
containers to various points in the vast plant . . .

nated for 22 mobile and five semi-permanent feeding locations. It was estimated that 60 per cent of the employees were likely customers for in-plant feeding.

For the night shift, only 10 mobile units and one semi-permanent station were needed.

During the two weeks the plant was shut down for vacation the old central cafeteria was converted to a central commissary. Fifty per cent of the space was used for the production of food, receiving of supplies, storage of paper goods and a women's rest room.

Thirty per cent of the floor space of the old cafeteria was given over to berthing and loading facilities of the 22 mobile units, along with elaborate facilities for preparing coffee and tea, steriliz-

—To page 137

THE OLD plant cafeteria was outmoded, inconvenient, inadequate—and expensive to operate.

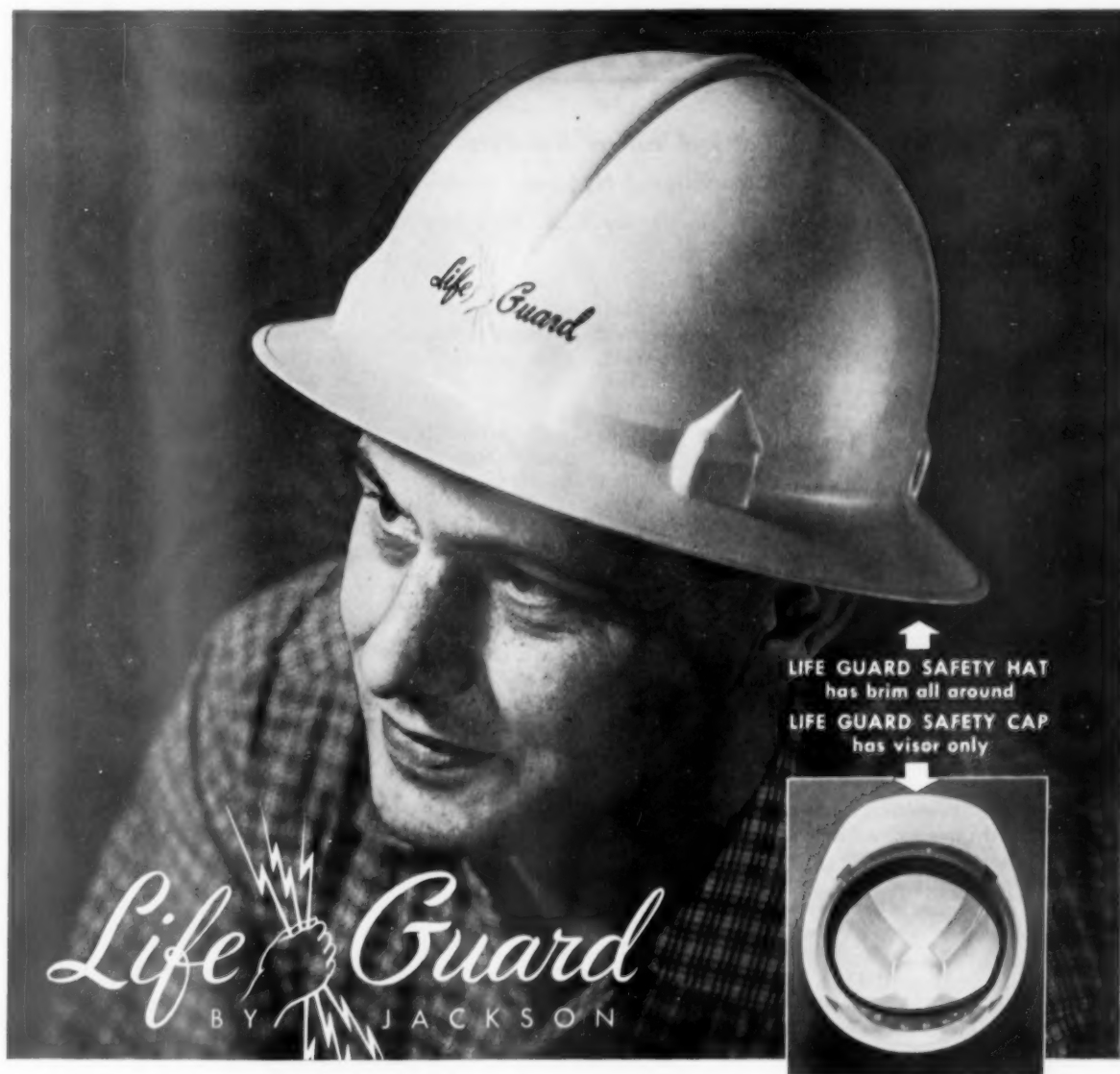
So, when Avro Aircraft Limited, Toronto, Ontario, reopened August 17, 1954 after the annual vacation, employees found that something had been changed. It was the in-plant food service.

Instead of spending valued minutes of the 30-minute lunch period getting to the old central cafeteria, employees spent not more than two minutes en route to feeding stations.

For the daytime when the greatest part of the working force is on hand, locations were desig-



And served piping hot or ice cold to employee consumers.



To ELECTRICAL WORKERS, these all-plastic Safety Hats and Caps offer top protection, comfortable wear, and attractive appearance.

They surpass the requirements of the Edison Institute specifications AP-1-1954, resist far in excess of 20,000 volts under electrical tests, thus providing an exceptional safety margin.

What's more, the LIFE GUARD also passes the requirements of Federal Specification GGG-H-142b for construction workers' hats and is therefore recommended as a superior ALL-PURPOSE SAFETY HAT.

The *Hat Shell* is smooth inside, without hazardous and uncomfortable projections. It is made of a specially developed injection molded plastic.

The *Headgear Assembly* combines great strength with

comfortable flexibility for better cushioning of impact. Headband and crown straps are molded in one piece of a special polyethylene plastic, soft but non-absorbent, combined with a soft-backed, leatherette-finished sweatband, all around the head. It is the fastest and easiest headband to adjust, and clearly marked in hat sizes. The headgear straps may be wiped clean while attached to the hat or the entire headgear can be removed, easily and without tools, for complete cleaning and sterilizing.

The *Safety Hat* has full brim all around, the *Cap* has visor in front, narrow brim at the sides and back. Both LIFE GUARDS are made in white, yellow and grey.

A *Chin Strap* is optional. Made of colorful, high quality elastic webbing, with smooth, napped cotton inside, it has plastic fittings to adjust and attach to the headgear.

Manufacturers of Jackson Fiber Glass Safety Hats and Welding Helmets, Welding and Chipping Goggles, Eye and Face Shields. Also Cap-and-Helmet, Cap-and-Goggle, Hat and Face Shield Combinations.

For Arc Welding: Electrode Holders, Cable Connectors, Splicers and Lugs.

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INDUSTRIAL HEALTH



Abstracts of current literature

on Occupational Hygiene, Medicine, and Nursing

By F. A. Van Atta, Director, Research Division, NSC

Silicosis Control

"The Neutralization of Silica Toxicity in Vitro." By J. Marks. *The British Journal of Industrial Medicine*, 14: 18-84 (April, 1957).

THE CAPACITY of aluminum to prevent experimental silicosis in animals is well established, but there is no adequate evidence at the present time that it has an equal effect in man. Also, it is possible that it is not completely innocuous in itself. For this reason there has been an impetus to investigate other possible materials for control of silicosis, and recently a procedure has been developed for evaluating the effectiveness of antagonists to silica in tissue cultures in vitro. It is a suitable technique for screening large numbers of drugs and some results are reported here.

Various organic bases are thought of as possible alternatives to aluminum since they are known to combine with silicic acid and to precipitate silicic acid from its colloidal suspensions. A number of these organic bases have also been studied for their activity in releasing histamine in vivo and are relatively toxic because of this activity.

The compounds studied were methyl, ethyl, propyl, butyl, hexyl, octyl and decyl, amines; ethylene diamine; hexamethylene diamine; decamethylene diamine; stilbamidine; propamidine; pentamidine; histamine; methylene blue; toluidine blue; polymyxin B; cytochrome c; protamine; and compound 48-80 which is prepared by the condensation of p-methoxy-2N - methylamino - ethylbenzene with formaldehyde.

The damage was assessed by direct observation of the tissue cultures and also, by measuring the glucose consumption and dehydrogenase activity. The compounds and potassium alum were

tested for their ability to protect the cells in the culture against tridymite, cristobalite, quartz and vitreous silica.

All of the amines except methylaniline showed some protection against all of these compounds. The compound 48-80 was very effective. It provided a protection against quartz and vitreous silica as effective as was provided by alum and was considerably more effective against tridymite and cristobalite.

The compound 48-80 was effective at a concentration of 0.1 per cent in reducing the solubility of silica in isotonic saline solution similar to serum and appeared to reduce the toxicity of silica to phagocytes without reducing their activity. The compound 48-80 was slightly toxic in concentrations of 10 micrograms per m-liter or more. But, good protection against silica was given at concentrations of 5 micrograms per m-liter. The presence of silica also somewhat reduced the toxicity of 48-80.

Fast Test for Hearing Loss

"A New Instrument and Concept for the Rapid Detection of a Possible Hearing Impairment." By Howard P. House. *Transactions of the American Academy of Ophthalmology and Otolaryngology*, 61: 228-230 (March-April 1957).

THE OTO-CHEK is a battery powered screening audiometer about 5½ x 4 x 2 in. in size and weighing approximately 1½ lbs. There are two models, one of which tests hearing at 4,000 cycles per second, with fixed outputs of 20, 35 and 50 db. The other tests at 2,000 cycles and at 4,000 cycles, with fixed outputs of 15 and 35 db. Both models have either single or double earphones which are energized by push buttons, labeled in decibels of hearing loss in accordance with the Oto-Chek.

The idea originated from the observation that very few audiograms show a greater loss at any lower frequency than is shown at 4,000 cycles. To test this concept, three large groups of audiograms were analyzed at 4,000 cycles and 1,500 elementary school children in the Los Angeles school system were tested with the two-frequency instrument.

The first sample of audiograms analyzed was obtained by taking every tenth case of patients with hearing impairments from Dr. House's office files from 1950 on. This gave 1,128 audiograms on which the diagnosis was hearing loss due to ageing in 16.6 per cent of the cases and otosclerosis in 34.1 of the cases, with a variety of conditions accounting for the other approximately half of the cases. Among these audiograms 98.2 per cent of the cases showing a 15 db. or greater loss at 4,000 cycles in either ear had no greater loss at any lower frequency. When the 2,000 cycle per second frequency was added the percentage accuracy increased to 99.2 per cent.

The second study was of the records of 1,971 male aircraft workers taken from the files of the sub-committee on noise in industry; 99.2 per cent of these men had no greater loss at any lower frequency than was recorded at 4,000 cycles per second. Of a group of 1,749 males measured at the 1954 Wisconsin State Fair, 99.5 per cent had no greater loss at a lower frequency than at 4,000 cycles.

As a further test, a group of 1,500 Los Angeles school children were screened by the Oto-Chek at 4,000 cycles per second. This test was then followed by the standard test method used in the Los Angeles school system; 94.4

—To page 142



NO SLIPS ... NO FALLS ... NO INJURIES

With Alcoa Abrasive Tread Plate

Hard, sharp particles of fused aluminum oxide give a grinding wheel its *bite* and Alcoa® Abrasive Tread Plate its *grip*.

This abrasive surface is rolled into tough, aluminum alloy plate. It can't come off. Its slip-proof qualities are more than surface deep.

It stays slip-proof when wet, oily, greasy.

Because it's aluminum, it is durable, corrosion resistant and never needs painting.

Use this safer, longer lasting tread plate wherever accidents might happen. Your safety committee knows all the places.

Just remember that 20,000 workers are killed and thousands injured in slipping accidents each year. If it prevents just one such accident in your plant, Alcoa Abrasive Tread Plate would be the best insurance you can buy.

Check the coupon for a four-inch sample and complete details. Aluminum Company of America, 1671-G Alcoa Building, Pittsburgh 19, Pa.

Your Guide to the Best in Aluminum Value



THE ALCOA HOUR—
Television's Finest Live Drama
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Aluminum Company of America
1671-G Alcoa Building
Pittsburgh 19, Pa.

Please send literature and four-inch sample of abrasive tread plate.

Name and title _____

Company _____

Use being considered _____

Address _____

City and State _____

Dearborn Crowns Safety Queen

WHAT HAS feminine beauty got to do with industrial accident prevention?

The North Carolina Industrial Commission found out recently that pulchritude can be a powerful promotion device when the state's first safety queen was crowned in an unusual contest. This was one competition where beauty was not enough—each entrant had also to give a two-minute talk on safety.

Ned H. Dearborn, National Safety Council president, was on hand at the 27th Annual Statewide Safety Conference to bestow the queen's honors on Mrs. Ellen Eason, representing Gardner's Dairies, Dunn, N. C. She won an expense-paid trip to the 45th National Safety Congress in Chicago next October and several other gifts.

The brainchild of Wendell W. McDevitt, Commission safety representative, the contest began



MRS. ELLEN EASON is crowned Safety Queen by NSC President Ned H. Dearborn at the 27th Annual Statewide Safety Conference, in Raleigh, N. C.

with the selection of a representative from each department in industrial plants throughout the state. Then at safety meetings each plant selected a queen to represent it in one of the eight

contests sponsored by regional safety councils.

Newspaper publicity and local promotion efforts stirred up great interest in the contests. At some plants attendance at safety meetings soared from 75 to 450. The Dayton Rubber Company, Waynesville, and the American Thread Company, Sevier, carried out two of the largest contests in the state.

The contest was promoted on a statewide basis by H. S. Baucom, Commission safety director, and regionally by H. L. Jennerjohn, eastern safety representative for the Commission; E. W. Griffith in the Piedmont section, and by Mr. McDevitt in the western section.

Several hundred persons attended each of the council meetings where the regional winners were chosen. The girls' pictures appeared in local papers and many of them were interviewed on television.

The Asheville Merchant's Association cooperated in the Western North Carolina Safety Council Queen Contest and presented the local winner with \$100 in cash, a diamond ring, a cedar chest and a new convertible for her use at the Statewide Safety Contest.

Commission officials regard the contest as the most effective means of promoting accident pre-

—To page 140

LATEST DEVELOPMENT IN WHEEL GUARDS... FOR PORTABLE GRINDERS WHEN USING FLARING CUP AND STRAIGHT CUP WHEELS...

MORRISON

CUP GUARDS

REVOLVING

REVOLVES WITH WHEEL

MAXIMUM STRENGTH AND SAFETY—Allows Full View of Work

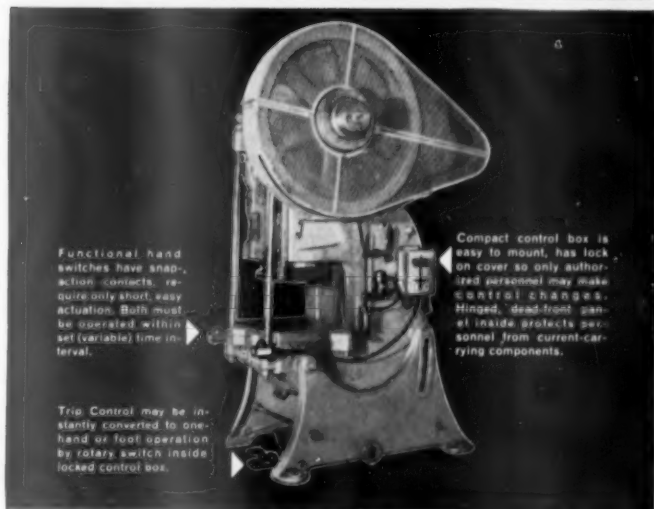
Part	Size	List Price
C-4	6-4 1/2	\$4.90
C-5A	5-4	4.80
C-5B	5-3 1/2	4.80
C-4	4-3	4.70
C-5A	6	4.90
C-5-5	5	4.80
C-5-4	4	4.70

Adapter for straight bushed wheel—list price \$4.75

SEE YOUR GRINDING WHEEL SUPPLIER

MORRISON PRODUCTS INC. • 16816 Waterloo Road Cleveland 10, Ohio

MICRO SWITCH . . . FIRST IN PRECISION SWITCHING



Functional hand switches have snap-action contacts, require only short, easy actuation. Both must be operated within set (variable) time interval.

Trip Control may be instantly converted to one-hand or foot operation by rotary switch inside locked control box.

Compact control box is easy to mount, has lock on cover so only authorized personnel may make control changes. Hinged, "dead-front" panel inside protects personnel from current-carrying components.

MICRO SWITCH TRIP CONTROLS

for more
PRODUCTION
with increased Safety

MICRO SWITCH Trip Controls have wide range of uses

These controls offer a choice of desirable single stroke control for positive mechanical clutch machines and automatic cycling control for friction clutches and hydraulic and pneumatic equipment.

FOR SMALL PRESSES

Provides faster, safer operation with less effort of small two-hand presses, riveting machines, etc.



FOR PAPER CUTTERS



Complete protection is afforded operator in cutting or trimming either flat stock or labels.

WIDE VARIETY OF PRESS CONTROL METHODS AVAILABLE

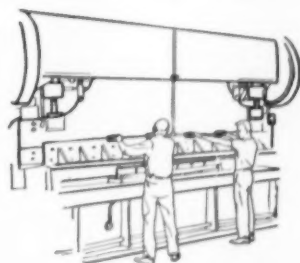
- 1 One operator—two hands.
- 2 One operator—two hands or one foot.
- 3 One operator—two hands or either hand or one foot.
- 4 Two operators—one to four hands, any combination, or one foot.
- 5 Three operators—one to six hands, any combination, or one foot.
- 6 More than six hands, any combination, or one foot.

INCREASED PRODUCTION with INCREASED SAFETY

- Instant electrical response
- Feather-touch operation
- Easy control changes
- Decreased operator fatigue
- Two hand operation
- Cannot be "cheated"
- Interlock prevents power stroke while changing dies

FOR USE ON LARGE PRESSES

Makes operation of large presses and press brakes safe and less tiring. Any number of operator stations may be "wired into" the control circuit.



Let us send you complete information on MICRO SWITCH Trip Control and the name of the distributor nearest you.



SEND FOR CATALOG 65 TODAY

Gives complete description of all controls and clutch actuating equipment.

MICRO SWITCH

A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS





WHAT'S NEW

IN
NATIONAL SAFETY COUNCIL SERVICES *

Operation Safety

In today's traffic pattern "shifting mental gears" has become as important as driving skill. Varied driving conditions brought about by the growth of the expressway, the increased use of the automobile to transport workers to their jobs and shifting patterns of residential and shopping areas call for a more alert, more flexible, more thoughtful driver.

Emphasis of the Operation Safety theme for August—"Share the Road" Driving—is on driver adaptability to these changing traffic situations. Many of the items in the kit deal with super-highway driving and other techniques vital to all motorists to help them use the roads safely.

In addition, August kit materials also reflect the stepped-up official action being taken this summer to curb traffic accidents and provide for a smoother, safer flow of traffic. These official agencies, including police and courts, motor vehicle departments, highway departments and traffic engineering sections, are leading the nationwide "attack" on traffic legislation and are able to make great strides in effectively curbing traffic injuries and deaths.

Featured poster of the month shows an orderly picture on a modern expressway with the slogan, "Keep in Step with Traffic—Share the Road." This poster continues an approach to improving driver and pedestrian attitudes begun earlier this year with the

"Make Driving Pleasant—Follow the Rules" poster. These posters stress the positive or pleasurable side of driving, avoiding the warning "Don't" and the inevitable crash scene.

Leaflets samples in the August kit include the third in the Back the Attack series—*Close Ranks* and *Alert Today—Alive Tomorrow*.

The August program is the last Operation Safety program packaged in a kit. Beginning with September, Operation Safety will appear as a special section of *Traffic Safety Magazine*.

For information write to National Safety Council, 425 N. Michigan Ave., Chicago 11.

13 Rules for Cyclists

Fun on a Bike can be just that—if bike riders follow a few simple rules contained in a National



* Look to this page each month for latest news about NSC services. Address request for additional information, samples or prices to the Membership Department.

Safety Council booklet by that name.

The booklet—successor to *Sammy Sprocket Says*—lists 13 ways to have safe fun on a bike, including:

1. Obey traffic laws, lights and signs—they're for bike riders, too.
2. Check your bike. Is it your size? Does it have proper safety equipment?

3. Light up at night if you have to ride then. Be sure your bike has a white light in front and a red reflector and tail light in the rear.

Free single copies of the colorful booklet are available on request.

Protect Mom's Toes When She Mows the Lawn

LATEST ADDITION to milady's shoe wardrobe is a safety shoe for power mowing.

A St. Louis shoe manufacturing firm reports that the company is now offering a steel-toe safety shoe for the housewife's lawn cutting protection.

International Shoe Company reports strong dealer and customer acceptance of the idea since the shoe was placed in the line a few months ago.

Sales experts count on the security dad gains while he lounges in the hammock (knowing that mother is safely at work) to be a strong selling point.

The only color available is beige. A similar shoe in matching smoked shag is available with the safety feature for the man of the house who wants to team up with his wife on the cutting chores.

The shoes are also suggested as casual wear for beginners on the dance floor.

The footwear, equipped with slip-resistant soles, was International's Hy-Test Safety division's answer to the growing number of power mower casualties reported in St. Louis hospitals last summer.

Wife to husband: "I wish you had the spunk the government has. They certainly don't let being in debt keep them from spending."

Tuffy® Slings Give Steel Mill Twice the Service of Ordinary Slings

"We are getting twice the service life from our 1¼-inch Tuffy Slings as we did from 6x37 type slings."

This testimonial from a giant steel corporation says more for the quality and dependability of Tuffy Slings than we could tell you in any other way!

The secret of Tuffy's longer life is Tuffy's exclusive, patented, braided construction. This machine-braided fabric combines super strength with extra flexibility.

It's Almost Impossible to Kink a Tuffy Sling. Try It!

Even if you succeed in kinking a Tuffy Sling with the help of a vise, you can straighten it out with no material damage to the fabric. Tuffy's resistance to knotting, kinking and looping is just one reason why Tuffy Slings can give you double the service of ordinary slings. Now let's take a look at the Tuffy ferrule:

Tuffy Pressed-On Ferrule Gives 100% of Fabric Strength

Applied under tremendous pressure, the steel ferrule literally flows into every space between the wires and strands. The friction force created gives the eye splice full strength of the sling fabric.

Your Tuffy Distributor is Stocked to Meet Your Needs

He's ready with your Tuffy Slings and Union Wire Rope needs. Get in touch with him now!


Get Your **FREE**
Tuffy Sling
Handbook



Gives full data on Tuffy Sling types, dimensions, weights and rated loads. Plus a complete rigger's manual and engineer's notebook on wire rope constructions and specifications. Write for copy now!



HOT and HEAVY — this huge ladle is "handled with care" by a 1¼" Tuffy Sling and two 1½" Tuffy Hoist Lines. The load is 125 tons of molten steel being poured into the furnace.

union  **Wire Rope corp.**

Specialists in high-carbon wire, wire rope, braided wire fabric, and stress-relieved wire and strand.

(4)

2224 Manchester Avenue

Kansas City 26, Missouri

Circle Item No. 61—Reader Service Card

PERSONALS

News of people in safety
and related activities

Reorganize Safety Dept. At Eli Lilly

TWO NEW departments have been formed from what was formerly Eli Lilly and Company's industrial medicine and safety department. Heading the new safety and industrial hygiene department is G. R. CUMMINGS. KARL C. KOHLSTAEDT, M. D., has been named head of the new industrial medicine department. Both men were assistant heads of the old department.

This move is the result of Lilly expansion in recent years, including the building of a new plant near Lafayette, an accelerated agricultural research program at Greenfield, and the acquisition of a new subsidiary in Omaha. JAMES D. PEIRCE, M.D., who continued to serve as head of industrial medicine and safety even after he was named assistant director of the personnel relations division in 1955, will be able to devote more time to health and safety programs for Lilly employees in all plants and subsidiaries.

Mr. Cummings has been associated with safety work at Lilly since 1941. He joined the firm in 1927 and for fourteen years received experience in various manufacturing departments. A native of Quincy, Ind., he was graduated from Quincy High School in 1926.

Mr. Cummings serves as chairman of both the visual side committee of the National Safety Council's Chemical Section and the Industrial Section of the Indianapolis Safety Council. For several years he has been a member of the advisory council of the United States Department of Labor. He is also a member of the American Industrial Hygiene Association and the industrial health and safety committee of the Indiana Manufacturers Associ-

ation. He is chairman of Marion County Civil Defense for region 8.

Dr. Kohlstaedt joined Lilly in 1954 after service with the United States Navy. Previously he had engaged in private practice in Indianapolis.

A native of Indianapolis, Dr. Kohlstaedt was graduated from Shortridge High School in 1937. He received his Bachelor of Arts degree from Wabash College in 1941 and his Doctor of Medicine degree from the University of Cincinnati College of Medicine in 1944. He served his internship and residency in medicine at Indianapolis General Hospital, where he received a fellowship from Indiana University.

JENNINGS B. HAMBLÉN has been named director of safety for American Oil Company, New York, succeeding L. E. MITCHISON who retired recently.

Mr. Hamblén joined the research department of Standard Oil Company (Indiana), parent company of American, at its Whiting, Ind., refinery in 1927. In 1935 he was transferred to American's Destrehan, La., refinery as assistant superintendent, and a year later was transferred to American's Texas City, Tex., refinery as head of the catalytic and distillation department.

In 1947 he was transferred to New Orleans as general manager of manufacturing for Pan-Am Southern Corporation, an affiliate, and in 1951 was named safety di-

rector for that company. He was transferred to New York in 1956 to become assistant director of safety for American.

A native of Franklin, Ind., Mr. Hamblén was graduated from the University of Wisconsin where he was awarded a bachelor of science degree in chemical engineering. He later received a master's degree in chemical engineering at Massachusetts Institute of Technology. He served as a lieutenant in the field artillery during World War I.

KENNETH I. CROSIER has been appointed to the newly-created supervisory position of safety engineer in Kaiser Engineers, with headquarters in Oakland, Calif. He will be responsible primarily for supervision and coordination of safety and accident prevention activities on all of the company's projects throughout the United States. He will report directly to Jack W. Walling, Kaiser Engineers' manager of industrial relations.

Crosier has a background of 22 years experience exclusively in construction and industrial safety work. He first joined the Kaiser organization in 1938 as a safety inspector on Grand Coulee Dam. Since that time he has managed Kaiser Engineers' safety activities on a number of their major U. S. projects, including the Portland Shipyards, Detroit and Big Cliff Dams, and the Hanford and Idaho Falls Atomic Energy Commission projects.

During the period he was project safety engineer at Idaho's Engineering Test Reactor project, Kaiser Engineers won the first construction contractor's award ever presented by that state in recognition of their working more than a million man-hours without a disabling injury.

Coordinating safety activities on all current Kaiser Engineers projects in the United States, Crosier will cover work being done at the Aluminum Reduction Plant and Rolling Mill, Ravenswood, W. Va.; Alumina & Caustic Chlorine Plants, Gramercy, La.; Steam Power Plant, Josephstown, Pa.; Coke Calcining Facilities,



Jennings B. Hamblén

Circle Item No. 62—Reader Service Card

National Safety News, July, 1957

Multigrip Floor Plate . . .

structural strength plus safe footing
on coke recovery lines

Through these huge recovery mains pour millions of cubic feet of coke-oven gas and tars, on the way to becoming myriad by-products. On top of the lines (surfaced with USS Multigrip Floor Plate) are spooning holes and liquor-flushing connections to clean the lines.

Safe Footing. Plant workmen must walk on top of the lines, stepping over and around fittings. One slip could mean a serious accident. Here Multigrip per-

forms an important safety job every time a worker puts his foot down. Evenly spaced, flat-topped risers with clean edges afford traction from any direction, even when the plates are wet. Multigrip wears indefinitely without chipping, cracking or splintering. And it's available in large plates that eliminate installation waste. For safety, for long wear, for easy installation . . . specify USS Multigrip Floor Plate.

Multigrip can be cut, welded or formed where necessary.



Flat-topped, evenly spaced risers on Multigrip provide safe footing for workmen.



This 140-ton coke-oven gas collecting main, built by Jennings Mfg. Co., Masury, Ohio, is constructed of USS Structural Steel with a walkway of USS Multigrip Floor Plate.



UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



uss multigrip

FLOOR PLATE

Sold by leading distributors from coast to coast

UNITED STATES STEEL

Grand Junction, Colo.; Oxygen Converter Steel Plant, Aliquippa, Pa., and the major steel plant expansion program at Fontana, Calif.

CLIFFORD A. OLSON has been appointed district safety director in New York for the Kemper Insurance Companies.

Mr. Olson has been a safety engineer with the Kemper organization since 1940 in the companies' Chicago home office and branch offices in Boston and Summit, N. J. He was project engineer for construction of the Kemper group's Eastern department office at Summit.

From 1943 to 1946 he served as a combat engineer in the U. S. Army and participated in the Okinawa campaign.

HAROLD L. "HAL" RUSH has become ground safety director for the Tactical Air Command, Langley Air Force Base, Va. His former post was with the Warner Robins Air Material Area, Robins Air Force Base, Ga., where he served for five years.

Previously he was ground safety director of the Military Air Transport Service, Andrews Air Force Base, Md. It was during this tour the Berlin airlift was made.

A veteran of 22 years government service in safety, Mr. Rush is a member of the American Society of Safety Engineers, Society of American Military Engineers and Veterans of Safety. He has been cited four times for outstanding safety service to the federal government.

He has served in many capacities with the Federal Safety Council and was chairman of the Field Councils Division in Washington, D. C., during the time 100 field councils were organized. He also organized the Southern Fed-

eral Safety Council, consisting of 14 southern states, and is now serving as chairman of the Advisory Board of that body.

In 1940 he organized the safety program for the Caribbean Division, U. S. Engineers, in construction of army camps and air strips from Newfoundland to British Guiana. His duties have taken him to 46 different countries and islands.

Planning to retire in three years to a farm in Louisiana, he has taken up study of farm safety. "After all," he states, "it wouldn't be fittin' to be kicked to death by a mule on a 20-acre pea patch in Louisiana after traveling the world for 26 years."

WILLIAM A. CAVANAUGH, formerly safety supervisor for Caterpillar Tractor Company, Peoria, Ill., has been appointed safety administrator for Cutler-Hammer, Inc., Milwaukee. He will have direction of the safety program in all the company's Milwaukee plants.

The Milwaukee Road has announced the appointment of CHESTER J. DELIN as district safety engineer with headquarters in Tacoma, Wash., to succeed LAWRENCE W. DIETRICH who died in Seattle May 8.

Mr. Delin started with the railroad in its roundhouse in Tacoma in 1918. In 1919 he became a yard conductor.

York Chapter of The American Foundrymen's Society and a member of the American Society of Safety Engineers, Central City Lodge No. 305, Central City Consistory and the Tigris Temple.

Mr. Livingston is survived by his widow, Clara; a son, John F. II, a daughter, Mrs. Robert A. Long of Sayreville, N. J.; a granddaughter, three sisters, and an aunt.

Must Prove Safety Of New Materials

NEW MATERIALS being developed by industry sometimes aggravate allergies and cause other irritations which must be solved before useful products can be developed from them, an Akron rubber executive told the recent All-Ohio Safety Congress.

W. E. McCormick, director of industrial hygiene and toxicology for The B. F. Goodrich Company, said that "the physiological effects of newly developed materials are usually known by the toxicologists before workers are exposed to danger, but safe handling procedures must be hurriedly developed to guarantee a full degree of safety."

"Through animal experimentation, the industrial hygienist must develop the necessary information about new materials to set up plant control procedures. Until every known reaction to a new material has been explored, the toxicologist does not risk human exposure," Mr. McCormick said.

He described the physiological effects of numerous materials that have come into industrial use in recent years.

He also pointed out that ozone, a material present in smog, is highly toxic. "Exercise by the individual increases the toxic effects of ozone, while pre-exposure appears to develop a marked tolerance. Ozone's toxic effects are greatly enhanced under conditions of reduced atmospheric pressure."

"In recent years, the promoters of several commercial products have tried to introduce the use of ozone to cure a number of human ills. In every instance such uses of ozone have only increased the health hazard."

Obituary

JOHN F. LIVINGSTON

JOHN F. LIVINGSTON, assistant plant engineer and safety director for Crouse-Hinds Company, Syracuse, N. Y., died suddenly in April. He was 57.

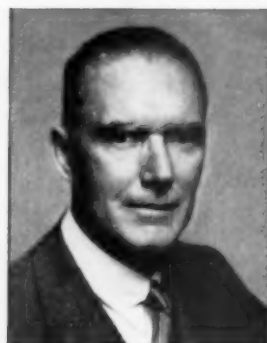
Associated with Crouse-Hinds for nearly 35 years, he was a member of the company's 25 Year Club. Mr. Livingston was a past chairman of the Central New

SAFETY ENGINEER

Good opportunity with established insurance company. Must have 3 years' casualty engineering experience. Salary open—excellent fringe benefits. Location—Knoxville, Tennessee. Write, giving full details, to Box 431 NATIONAL SAFETY NEWS.



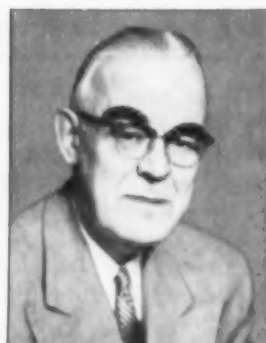
WALTER H. BRATTAIN. One of three winners of the 1956 Nobel Prize in Physics for investigations on semiconductors and the invention of the Transistor, the tiny device which has created a new electronic era in communications.



H. F. DODGE. Awarded Shewhart Medal by American Society for Quality Control, for original contributions to the art of statistical quality control—used by Western Electric in making millions of items of telephone equipment.



H. T. FRIIS. Awarded Medal of Honor, Institute of Radio Engineers and Valdemar Poulsen Gold Medal, Danish Academy of Technical Sciences for important work in application of short and ultra-short radio waves.



AXEL G. JENSEN. David Sarnoff Gold Medal, Society of Motion Picture and Television Engineers, for technical contributions to television; Hagemann Gold Medal for Industrial Research, Royal Technical College, Copenhagen.



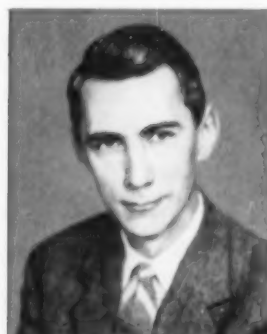
R. KOMPFFNER. Awarded Dudley Medal by the Physical Society of England for his original work on the traveling wave tube. This new amplifier makes it possible for long distance microwave highways to carry more telephone conversations and TV programs simultaneously.



WARREN A. HARRISON. Awarded the Tompion Gold Medal, Worshipful Company of Clockmakers of the City of London, for pioneer work on quartz crystal oscillators as precision standards of time. This control of electrical vibrations is used to send many voices over the same telephone line.



W. G. PFANN. Awarded the Matthewson Gold Medal by the American Institute of Mining and Metallurgical Engineers for discovery of and pioneering research in zone melting. This provides the extraordinary purity of silicon and germanium needed in the manufacture of transistors.



CLAUDE E. SHANNON. Awarded the Stuart Ballantine Medal by the Franklin Institute for contributions to a comprehensive theory of communication. This greatly illuminates our understanding of how communications systems handle information. It points to new ways to improve service.

Partners and Pioneers in Progress

On this page are some of the Bell Telephone Laboratories scientists and engineers who have been honored recently for outstanding achievement in the sciences that bear on telephony.

We are proud of this fine recognition of their work and the contributions of the many other engineers and scientists who are helping to make telephone dreams come true.

For always there have been dreams and high hopes in the telephone business. Growth begets growth. Research reveals new vistas. The words of thirty years ago are even more true today. "The future of the telephone holds forth the promise of a service growing always greater and better and of a progress the end of which no one can foresee."

A considerable part of that prophecy has been fulfilled. But great as the progress has been, there is still greater progress to come.

Never have there been so many opportunities for wholly new developments in telephone service and so much well-rounded research to put behind them. All that has been done is just the beginning.

Working together to bring people together . . . BELL TELEPHONE SYSTEM



THE SAFETY LIBRARY



Books, pamphlets and periodicals of interest to safety men

Compiled by Ruth Parks, Librarian, NSC

Contemporary Developments In Occupational Health

The Proceedings of the Third Annual Industrial Workshop in Industrial Nursing is now obtainable for \$2 a copy from the Industrial Nursing Trust Fund, Industrial Workshop, Department of Preventive Medicine and Public Health, University of Oklahoma Medical Center, 800 N. E. 13th St., Oklahoma City 4, Okla.

For those who attended the workshop (May 25-26, 1956) this volume is a valuable record; for those who did not, it is a full and easily-read account of all that took place. Attending such a workshop is a great experience and nurses should welcome the chance to share in it by reading the transactions.

Subjects include "The Physically Handicapped Woman at Work," "Family Counselling," "Nursing Following Disasters," "Preventive Medical Phases of Industrial Nursing," "Emotional Problems on the Job," "Industrial Relations and Industrial Nursing—A Joint Operation," "The Atom in Industry," and other up-to-the-minute problems.

Participants include Katharine Lembright, R. N.; Dr. Jean S. Felton; Jane M. Weaver, R. N., and Dr. Thomas H. Haight. All are distinguished in their special fields and their contributions to the workshop are important and authentic.

—JANE S. WEIR

BOOKS AND PAMPHLETS

Aeronautics

Survey of Research Projects in the Field of Aviation Safety. The Daniel and Florence Guggenheim Aviation Safety Center at Cornell University, 468 Fourth Ave., New York 16. 1957, 114p. \$2.00.

Marine Industry

Precautions During Stevedoring Operations. Pacific Maritime Asso-

ciations, 16 California St., San Francisco 11. 1957, 5p. Marine Safe Practices No. 112.

Mines

Falls of Roof—The No. 1 Killer at Bituminous Coal Mines, 1956. U. S. Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa., 1957, 13p. H55, No. 454.

Studies on the Development and Control of Coal-Dust Explosions in Mines. U. S. Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. 27p., 1957, Information Circular 7785. Free.

MAGAZINE ARTICLES

Accident-Prone

"Do You Happen to Accidents?" Lydia Strong. *Supervisory Management*, May 1957, p.28-33.

Alcohol

"Problem Drinking in Industry." S. Charles Franco. *Industrial Medicine and Surgery*, May 1957, p.221-228.

Chemicals

"An Outbreak of Tri-Ortho-Cresyl Phosphate (T.O.C.P.) Poisoning in Durban." Mervyn Susser and Zena Stein. *British Journal of Industrial Medicine*, Apr. 1957, p. 111-120.

Commercial Vehicles

"How to Kill a Safety Program." *Commercial Car Journal*, May 1957, p.82-83.

Electrical Industry

"Designed for Safety." E. W. Rogers. *Electric Light and Power*, May 15, 1957, p.80-86.

Fire Protection

"What to Do About Industrial Plant Inspections." *Firemen*, May 1957, p.16-17.

Gas Industry

"Safety Needs Management Support." Theodore H. Kendall. *American Gas Association Monthly*, May 1957, p.17.

Grinding Wheels

"Play It Safe With Portable Abrasive Tools." *Factory Management*

and Maintenance, May 1957, p.98-101.

Health

"The Common Cold and Stress Conditions." Nicholas Dietz. *Industrial Medicine and Surgery*, May 1957, p.229-233.

"The Health of the Worker." P. A. B. Raffle. *British Journal of Industrial Medicine*, Apr. 1957, p.73-80.

"The Neutralization of Silica Toxicity in Vitro." J. Marks. *British Journal of Industrial Medicine*, Apr. 1957, p. 81-84.

"Radiological Surveys of Working Quarriesmen and Quarrying Communities in Caernarvonshire." T. Francis Jarman and others. *British Journal of Industrial Medicine*, Apr. 1957, p.95-104.

"Silicosis Hazards in Enamelling." Lars Friberg and Harry Ohman. *British Journal of Industrial Medicine*, Apr. 1957, p.85-94.

"What Does Illness Cost Industry?" *Grinding and Finishing*, Apr. 1957, p.62, 65-66.

Hospitals

"The Employees' Responsibility in a Fire Protection Program." Thomas J. Dovgala, Jr. *Mental Hospitals*, May 1957, p.14-15.

Mines

"Safety Training for Operating Personnel." W. H. Thompson. *Mechanization*, Apr. 1957, p.133-134.

Off-the-Job Safety

"A 24-Hour Day Safety Program." S. M. Mac Cutcheon. *Industrial and Engineering Chemistry*, Apr. 1957, p.83A-84A.

Printing Industry

"Increase Your Profits With Safety." L. E. Johnston. *Graphic Arts Monthly*, May 1957, p.6-12.

Textile Industry

"An Outbreak of Weaver's Cough Associated with Tararind Seed Powder." Robert Murray and others. *British Journal of Industrial Medicine*, Apr. 1957, p.105-110.

Workmen's Compensation

"Workmen's Compensation—How Far Should It Reach?" Joseph R. Shaw. *Monitor (New York)*, Mar.-Apr. 1957, p.3-5.

"Workmen's Compensation and Radiation Hazards." *Monthly Labor Review*, Apr. 1957. p.455-459.

Addresses of Magazines Mentioned

British Journal of Industrial Medicine, British Medical Association House, Travistock Square, London W.C.1, England.



*Titan—combination
metal-plastic frame*



Y-60—all plastic frame



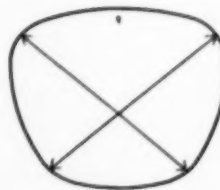
M-40—all-metal frame

Why B&L "new look"

Safety Glasses give you protection-plus

With more complete orbital coverage, stronger frame, and Bal-SAFE impact-resistant lenses, B&L "new look" safety eyewear means better protection against flying particles and objects. But more than that—you get new economy through flexibility of use: you can interchange temples and side shields—thereby extending fewer basic types of frames over a broader range of job hazards. This means reduced safety frame inventories—a definite saving. Workers like the new S-7 shape, too, for its smarter appearance. In plano or prescription lenses. For complete details, phone the B&L supplier in your area. Or write: Bausch & Lomb Optical Co., 90319 Smith Street, Rochester 2, New York.

America's only complete optical source—glass to finished product



**New S-7 Bal-SAFE lens shape . . .
for wider field of vision,
better eye coverage,
smarter appearance.*

Circle Item No. 63—Reader Service Card

Commercial Car Journal, Chilton Co., Chestnut & 56th St., Philadelphia.

Electric Light and Power, Haywood Publishing Co., 22 E. Huron St., Chicago 11.

Factory Management and Maintenance, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36.

Fireman, National Fire Protection Assn., 60 Batterymarch St., Boston 10.

Graphic Arts Manual, 608 S. Dearborn St., Chicago 5.

Grinding and Finishing, Hitchcock Publishing Co., 222 E. Willow Ave., Wheaton, Ill.

Industrial Medicine and Surgery, 605 N. Michigan Ave., Chicago 11.

Mechanization, Munsey Bldg., Washington 4, D. C.

Mental Hospitals, American Psychiatric Assn., 1785 Massachusetts Ave., N.W., Washington, D. C.

Monitor (New York), Association Industries of the State of New York, Albany, N. Y.

Monthly Labor Review, U. S. Bureau of Labor Statistics, Washington 25, D. C.

Supervisory Management, American Management Assn., 1515 Broadway, New York 36.

COMING EVENTS



in the
safety field

Sept. 12-13, York Harbor, Maine

Thirtieth Annual Maine State Safety Conference (Marshall House). Arthur F. Minchin, secretary, Department of Labor and Industry, State House, Augusta, Maine.

Sept. 17-19, Cleveland, Ohio

Nineteenth Annual Ohio State Safety Conference (Hotel Carter). H.G.J. Hayes, secretary-treasurer, Suite 514-2073 E. 9th St., Cleveland 15, Ohio.

Sept. 23-26, Montreal, Canada

Annual Meeting of the American Transit Association (Sheraton Mt. Royal Hotel). Arthur W. Baker, general secretary, 292 Madison Ave., New York 17.

Oct. 16-17, Chicago

Second Annual Sanitation Maintenance Show and Conference (Navy Pier). Orkin Expositions Management, 19 W. 44th St., New York 36.

Oct. 21-25, Chicago

Forty-fifth National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 7-8, Seattle, Wash.

Northwest Safety Conference (New Exhibition Hall, Olympic Hotel). William A. Feathers, manager, Seattle-King County Safety Council, 1014 Third Ave., Seattle 4, Wash.

Nov. 11-15, Cleveland, Ohio

Eighty-fifth Annual Meeting, American Public Health Assn. Dr. Reginald M. Atwater, executive director, APHA, 1790 Broadway, New York 19.

Nov. 13-15, San Francisco

National Conference on Standards (St. Francis Hotel). Cyril Ainsworth, technical director, American Standards Assn., 70 E. 40th St., New York 17.

Dec. 9-10, New Orleans

Louisiana Safety Association Conference (Roosevelt Hotel). Charles E. Doerler, secretary, Louisiana Safety Association, P.O. Box 1148, Shreveport, La.

1958

Mar. 2-4, Memphis, Tenn.

Southern Safety Conference. W. L. Groth, executive director, Southern Safety Conference, Inc., P. O. Box 8927, Richmond, Va.

Mar. 17-18, Boston

Thirty-seventh Annual Massachusetts Safety Conference and Exhibit (Hotel Statler). Bert R. Harmon, assistant manager, Massachusetts Safety Council, 31 State St., Boston 9.

Mar. 17-19, Los Angeles

Fifth Annual Western Safety Congress and Exhibits. Joseph M. Kaplan, manager, Greater Los Angeles Chapter, National Safety Council, 3388 W. 8th St., Los Angeles 5.

Mar. 18-19, Fort Wayne, Ind.

Northeastern Indiana Safety Conference and Exhibit. Ivan A. Martin, manager, Safety Council, Chamber of Commerce of Fort Wayne, Fort Wayne, Ind.



Apr. 14-18, New York

Twenty-eighth Annual Safety Convention and Exposition of the Greater New York Safety Council (Hotel Statler). Paul F. Stricker, executive vice-president, 60 E. 42nd St., New York 17.

June 9-12, Cleveland, Ohio

Eighth National Materials Handling Exposition (Public Auditorium). Clapp & Poliak, Inc., Exposition Management, 341 Madison Ave., New York.

Eliminate
slipping
accidents!



Relgrit

Abrasive Embedded Grating Treads

Industrial plants throughout the country have found that Relgrit has practically eliminated slipping accidents wherever used.

Relgrit treads are made with an aluminum oxide abrasive, embedded in a "V" groove at the top of the grating bars and nosing. This forms a skid-proof surface that is virtually immune to wear; providing *permanent* protection from slippery surfaces due to water, mud, oil, grease, acids and chemicals. Relgrit is also made for platforms and all other grating areas.

You can't slip on Relgrit



Write for free sample
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*Relgrit Abrasive Gratings and Treads • Lightweight Bridge Flooring
Steel, Stainless and Aluminum Grating • Steel Mill Equipment*

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Winners of National Safety Council Awards for outstanding records

THREE TYPES of awards are given by the National Safety Council to industrial units in recognition of outstanding performance in accident prevention:

1. THE AWARD OF HONOR is available to units whose records, though not perfect, meet rigorous standards of excellence. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency rate and severity rate. The Award of Honor is available also to units which complete 3,000,000 man-hours without a disabling injury.

2. THE AWARD OF MERIT has similar, but less exacting requirements. Minimum number of injury-free man-hours needed to qualify is 1,000,000.

3. THE CERTIFICATE OF COMMENDATION is available only for injury-free records covering a period of one or more full calendar years and totaling 200,000 to 1,000,000 man-hours.

Details of eligibility requirements may be obtained by writing to the Statistics Division, National Safety Council.

AWARD OF HONOR

American Bosch Arma Corp., American Bosch Div., Springfield, Mass.
American Factors, Ltd., Kekaha Sugar Co., Ltd., Kakaha, Kauai, T. H.
American Motors Corp., Plant 5, Grand Rapids, Mich.
American Radiator & Standard Sanitary Corp. Two Awards: San Pablo (Calif.) Plant; Louisville (Ky.) Works.
American Seating Co., Grand Rapids, Mich. Entire company.
American Steel & Wire Div., U. S. Steel Corp., Cleveland, Ohio. Entire company.
Atchison, Topeka & Santa Fe Railway System, Kansas City Div., Chicago.
Bayuk Cigars, Inc., Philadelphia.
Britannia Mining & Smelting Co., Ltd., British Columbia, Canada.
Buckeye Cellulose Corp. Two Awards: Cellulose & Specialties Div., Memphis, Tenn.; Hollywood Mill, Memphis, Tenn.
Canada Cement Co., Ltd., Hull, Quebec, Canada.
Canadian Refractories, Ltd., Plant 1, Kilmar, Quebec.
Carbide & Carbon Chemicals Co., South Charleston, W. Va.
Chain Belt Co., Roller Chain Div., Springfield, Mass.
Chemstrand Corp., Nylon Plant, Pensacola, Fla.
Chrysler Corp. Two Awards: Nine Mile

Press Plant, Automotive Body Div., Mich.; Chrysler Detroit Tank Plant, Centerline, Mich.

Cyprus Mines Corp., Cyprus.

E. I. du Pont de Nemours & Co., Inc. Twenty-eight Awards: Textiles Inc. Prod. Res. Lab., Del.; Chemical Dept., Wilmington, Del.; Philadelphia Grasselli Works, Wilmington, Del.; Office Buildings Div., Wilmington, Del.; Hotel Du Pont, Wilmington, Del.; Chambers Construction, Wilmington, Del.; Chambers Works, Deepwater Point, N. J.; Belle Construction, Charleston, W. Va.; Sabine River Construction, Orange, Tex.; Doyle (Mass.) Works, Wilmington (Del.) Mech. Development Lab.; Paint, Varnish & Lacquer, Toledo; Philadelphia Finishes Plant; Newark (N. J.) Plant; Baltimore (Md.) Plant; Orlon Mfg., Camden, S. C.; Old Hickory Plant, Tenn.; Waynesboro (Va.) Plant; Chattanooga (Tenn.) Plant; Clinton (Iowa) Plant; Dana Plant; Repauno Plant, Gibbstown, N. J.; Houston Plant, El Porte, Tex.; Elastomers Lab., Wilmington, Del.; Tech Lab., Deepwater Point, N. J.; Bengel (Va.) Laboratory; Engineering Research Lab., Wilmington, Del.; Yerkes Celophane Lab., Buffalo, N. Y.

Farley & Loetscher Mfg. Co., Dubuque, Iowa.

Ford Motor Co. Three Awards: Twin Cities Assembly, St. Paul, Minn.; Metuchen Plant; Ford International Div., New York.

General Electric Co. Two Awards: Jet Engine Dept., A.G.T. Div., Cincinnati, Ohio; Direct Current Motor & Generator Dept., Erie, Pa.

General Petroleum Corp., Drilling Dept., Los Angeles.

General Shoe Corp., Pulaski, Tenn.

B. F. Goodrich Co., Aviation Products, Akron, Ohio.

W. R. Grace & Co., Surface Mining, Bartow, Fla.

S. J. Groves & Sons Co. Two Awards: Illinois Div., Minneapolis, Minn.

Harbison Walker Refractories Co. Two Awards: Clearfield 2 Works, Clearfield, Pa.; Mount Union Quarry.

H. J. Heinz Co., Tracy, Calif.

Houdaille Industries, Inc., Buffalo Hydraulic Div., Buffalo, N. Y.

Humble Oil & Refining Co., Exploration Dept., Houston, Tex.

International Business Machines, Inc., Poughkeepsie (N. Y.) Plant.

Jones & Laughlin Steel Corp. Two Awards: New York Ore Div., Star Lake, N. Y.; Wire Rope, Muncy, Pa.

Kendall Co., Oakland Plant, Newberry, S. C.

Lehigh Portland Cement Co., Oglesby, Ill.

Libby, McNeill & Libby, Selma, Calif.

Lockheed Aircraft Corp., Marietta, Ga.

Monsanto Chemical Co., Monsanto, Ill.

Mongomery Ward & Co., Baltimore, Md.

Morton Salt Co., Newark, Calif.

National Advisory Committee for Aeronautics, Lewis Flight Propulsion Laboratory, Cleveland, Ohio.

National Portland Cement Co., Bethlehem, Pa.

North American Aviation, Inc., Missile Development Div., Downey, Calif.

Pan American World Airways, Oacufuc (Alaska) Div.

Pickands Mather & Co., Hibbing (Minn.) Mine, Mahoning Ore & Steel Co.

Pittsburgh Plate Glass Co. Two Awards: Cwighton, Pa.; Zanesville, Ohio.

Radio Corporation of America. Four Awards: Canonsburg (Pa.) Plant; Bloomington, Ind.; Cherry Hill, Camden, N. J.; Woodbridge Plant, Avon, N. J.

Ravenna Arsenal, Inc., Apco, Ohio.

Republic Steel Corp. Two Awards: Bolt & Nut Div., Upson Plant, Cleveland, Ohio; Massillon (Ohio) Steel Plant.

St. Joseph Lead Co., Balmot Mine, New York.

Sylvania Electric Products Corp., Lighting Div.

The Texas Co., Port Neches (Tex.) Works.

Tidewater Construction Corp. Three Awards: Chesapeake Corp.; Norfolk, Va.; North Charleston, S. C.

Tidewater Oil Co., San Francisco.

Toledo Edison Co., Toledo, Ohio.

Working Up in the World with Ladders

**"Gold Medal" Ladders Help
Prevent Accidents on
off-the-Ground Work**



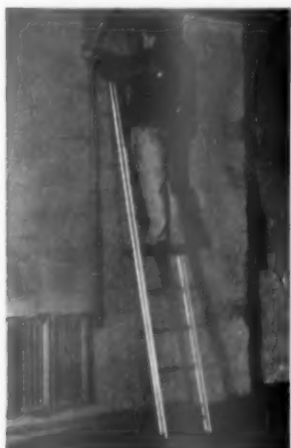
Extension Ladder with ladder jack makes a dependable stage support for painting windows and other work. "Gold Medal" Safety Extension Ladders are approved by U.L.



Sturdy 1 $\frac{1}{2}$ " rear rungs provide safe support for assistant on "Gold Medal" Safety Platform Ladder. Platform heights from 3' to 18'. Conforms to all safety codes.



Safest Step Ladder made the "Gold Medal" Safety Platform Ladder features a 14" x 19" platform plus a slotted tool rack at the top. Tools can't drop off and injure workers or machinery; man on ladder can safely work in any direction using both hands. Approved by Underwriter's Laboratories, Inc.



Lightweight Aluminum Ladders make handling easy, safe. Single ladders to 20', aluminum extension ladders to 40', step ladders to 8'.



These "Gold Medal" Safety Extension Trestles put workers at right height. Heights from 10' to 28'. Tested and approved by U.L.

Write now for free copy of Catalog L-71-R. See the Yellow pages of your 'phone directory for the nearest Patent Scaffolding Co. office or representative that handles "Gold Medal" Ladders and Scaffolds.

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Branches in all principal cities

Circle Item No. 65—Reader Service Card

Union Asbestos and Rubber Co., Marshville, N. C.

Union Carbide & Carbon Corp. Four Awards: Cleveland, Ohio; Linde Air Products Co., Speedway Laboratory, Ind.; Electro Metallurgical Co., Alloy, W. Va.; National Carbon Co., Clarksburg, W. Va.

Union Oil Co. of Calif., Research Dept., Los Angeles.

United States Forest Service.

U. S. Rubber Co., Los Angeles Plant.

U. S. Steel Corp. Four Awards: Gary (Ind.) Steel Works; Consolidated Western Steel Corp., Vernon, Calif.; Oliver Iron Mining Div., Pioneer Mine, Ely, Minn.; Carnegie-Illinois Steel Corp., South Works, Chicago.

Warner Co. Two Awards: Bellefonte (Pa.) Div.

Western Electric Co., New York Distributing House.

Westinghouse Electric Corp., Mansfield (Ohio) Works, Electric Appliance Div.

AWARD OF MERIT

AiResearch Mfg. Co. of Arizona, Phoenix, Ariz.

Allied Chemical & Dye Corp., Research Lab., Hopewell, Va.

Alpha Portland Cement Co., Three Awards: St. Louis Plant, Lemay, Mo.; Birmingham, Ala.; St. Louis, Mo.

American Brass Co., Waterbury (Conn.) Div.

American Can Co. Five Awards: Maywood, Ill.; Niagara Falls (N. Y.) Machine Shop; Cincinnati, Ohio; Maywood (Ill.) Technical Service; Maywood (Ill.) Fibre Container Plant.

American Chrome Co., Nye, Mont.

American Optical Co., Southbridge, Mass.

American Factors, Ltd. Three Awards: Lihue Plantation Co., Ltd., Lihue, Kauai, T. H.; Olan Sugar Co., Ltd., Olan, Hawaii; Oahu Sugar Co., Ltd., Waipahu, T. H.

American Radiator & Standard Sanitary Corp., Stamping Plant, Buffalo, N. Y.

Atchison, Topeka & Santa Fe Railway System. Three Awards: Colorado Div.; Northern Div.; Pecos Div.

Atlantic Refining Co., Marketing Retail, Philadelphia.

Avco Mfg. Corp., New Idea Div., Coldwater, Ohio.

Bayuk Cigars, Inc., York, Pa.

Beaunit Mills, Inc., Coosa Pines Div., Childersburg, Ala.

Bemis Bros. Bag Co., Milan Sta., Norfolk, Va.

Bessemer Limestone & Cement Co., Bessemer, Pa.

Bird & Son, Inc., Asphalt Roofing Plant, Chicago.

Blaw-Knox Co., Foundry & Mill Machine Div., Coraopolis, Pa.

Buckeye Cellulose Corp. Three Awards:

Air Force Wins Federal Award



SECRETARY OF THE AIR FORCE Donald A. Quarles (left) and Will L. Tubbs (Col., Ret.), assistant deputy chief of staff, personnel, for ground safety, are shown with the Federal Employee Safety Award recently presented to the Air Force by President Eisenhower.

The newly-created award is for the government agency making the greatest progress and improvement in safety programs for government employees. The inscription reads, "To the United States Air Force in recognition of the outstanding safety program for its employees in 1955."

Corinth (Miss.) Mill; Louisville (Ky.) Mill; Atlanta (Ga.) Mill.

Canada Cement Co., Ltd. Three Awards: Havelock, N. B.; East Montreal, Quebec; Belleville, Ontario.

Carbide & Carbon Chemicals Co., Charleston, W. Va.

Carrier Corp. Two Awards: Unitary Equipment Div.; Syracuse (N. Y.) Divs.

Celotex Corp., Lagro (Ind.) Plant.

Central Power & Light Co., Corpus Christi, Tex. Entire company.

Champion Paper & Fiber Co., Houston Div., Pasadena, Tex.

Chrysler Corp. Two Awards: Stamping Div., Mack Plant, Detroit, Mich.; Stamping Div., Vernor North Plant, Detroit, Mich.

Cincinnati Gas & Electric Co., Cincinnati, Ohio. Entire company.

Citizens Gas & Coke Utility, Indianapolis, Ind.

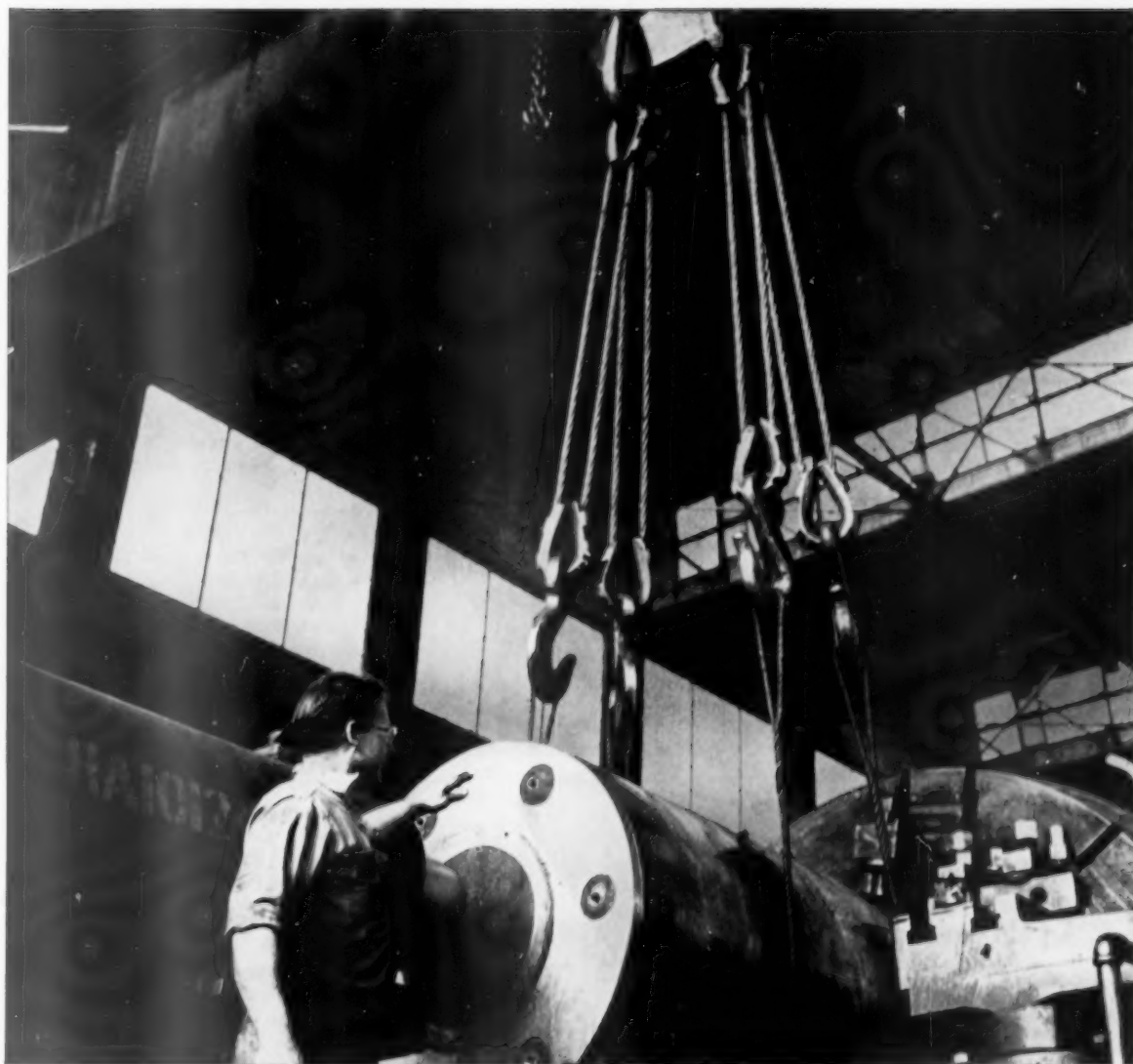
Consolidated Paper Corp., Ltd., Wayagamack Div., Grand Mere, Quebec.

Dan River Mills, Inc., Riverside Div., Danville, Va.

Dayton Rubber Co., Plant No. 1, Dayton, Ohio.

E. I. du Pont de Nemours & Co., Inc. Twenty-eight Awards: Printing Plant, Philadelphia; San Francisco Plant; Paint, Varnish & Lacquer, Parlin; Seneca Plant, Seneca, Ill.; Carl Junction (Mo.) Plant; Sabine River Construction, Orange, Tex.; Barksdale (Wisc.) Plant; Arlington (N. J.) Plant; Kinetic Plant, E. Chicago, Ind.; Grasselli Works, Wyandotte (Mich.) Plant; Chestnut Run Construction; East Chicago (Ind.) Works; Columbia Plant; Parlin (N. J.) Plant; Indiana Works; Louisville (Ky.) Works; Savannah River Plant; Wilmington (Del.) Shops; Yokes Plant, Henry Clay, Del.; Eastern Lab., Gibbstown, N. J.; Carothers (Del.) Research Lab.; Rayon Research Lab., Richmond, Va.; Olin Construction, Wilmington, Del.; Stine Lab., Newark, Del.; Jackson Lab., Deepwater Point, N. J.; Grasselli Research Lab., Del.; Exp. Station, Construction, Del.

Electro Metallurgical Co., Div. of U.C.C. Corp., Ashtabula, Ohio.



It settles so gently into place

Any big lift requires teamwork, and here you see an example as the load settles gently into place. The floor man might be called the quarterback; the deft, skilled touch of the crane operator is making the play "go." And the tough, sturdy slings are doing a lot of the muscle work.

Those wire rope slings are of Bethlehem manufacture, specially chosen for the kind of lift shown. The bridles consist of regular grommets equipped with thimbles and hooks. The slings around the load itself are a simpler type having spliced loop ends.

For touchy jobs like this, it's well to specify Bethlehem

slings as part of the lifting team. They're strong; they're tough; they're always dependable. They can be furnished in any style your plant requires—grommet, braided, single-part, etc. Every type of bridle rigging, standard or special, is quickly available.

Call us if we can help determine the proper slings for your particular set-up. Our engineers are old hands at this business, and they're always glad to be of service.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL



Flintkote Co., Pioneer Div., Los Angeles.

Ford Motor Co. Four Awards: Sandusky (Ohio) Plant; San Jose (Calif.) Assembly Plant; Dearborn (Mich.) Iron Foundry; Wayne (Mich.) Plant.

Formica Corp., Evendale Plant, Cincinnati, Ohio.

Gardner Board & Carton Co., Middletown, Ohio.

General Cigar Co., Huntington, W. Va.

General Electric Co., Euclid Lamp Works, Cleveland, Ohio.

General Foods Corp., White Plains, N. Y.

General Mills, Inc., Flour Mill, Minneapolis, Minn.

General Portland Cement Co., Dallas, Tex.

General Shoe Corp. Four Awards: Lewisburg, Tenn.; Carrollton, Ga.; Atlanta, Ga.; McMinnville, Tenn.

Giant Portland Cement Co., Egypt, Pa.

Glens Falls Portland Cement Co., Glens Falls, N. Y.

B. F. Goodrich Co., Industrial Products, Akron (Ohio) Plant.

Harbison Walker Refractories Co. Two Awards: Bessemer (Ala.) Works; Birmingham (Ala.) Works.

74% USE ŌNOX[®] TO STOP ATHLETE'S FOOT



74 of the 100 Largest Manufacturers use ŌNOX SKIN-TOUGHENER

Modern research has upset old theories about Athlete's Foot control. Skin specialists have proved that the best way to prevent Athlete's Foot is to improve the condition of the skin. *That's what ŌNOX does.* ŌNOX mineral salts toughen the skin and make it resistant to fungus growth.

**No splash • No mess • No waste • Odorless
Easy to maintain • Nothing to get out of order
Men like ŌNOX • Relieves tired, aching feet**

60 DAY TRIAL OFFER

We will ship your trial order for any amount of ŌNOX and footmats. *You pay nothing* unless fully satisfied after 60 days' use.

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SAN FRANCISCO 7, CALIF.

• WAREHOUSES •

BROOKLYN • CLEVELAND • NEW ORLEANS
HAWTHORNE, CALIF.

Holly Sugar Corp. Two Awards: Brawley, Calif.; Main Office, Colorado Springs, Colo.

Humble Oil & Refining Co. Three Awards: Natural Gasoline Dept., Houston, Tex.; Exploration Dept., Houston, Tex.; Drilling Dept., Houston, Tex.

Ideal Cement Co. Two Awards: Ft. Collins, Colo.; Ada, Okla.

Illinois Div. of Highways, Day Labor Section, Springfield, Ill.

Individual Drinking Cup Co., Inc., Darlington, S. C.

International Business Machine Corp., Greencastle, Ind.

International Harvester Co. Two Awards: Milwaukee; Research, Chicago.

Interprovincial Pipe Line Co., Edmonton, Alta., Canada.

Johnson, Drake & Piper, Inc., Minneapolis, Minn.

Jones & Laughlin Steel Corp., Pittsburgh (Pa.) Works.

Kellogg Co., Battle Creek (Mich.) Plant.

Kennecott Copper Corp. Two Awards: Bingham Mine, Bingham Canyon, Utah; Magna (Utah) Plant.

Ketchikan Pulp Co., Ketchikan, Alaska.

Kimberly Clark Corp., Berkeley Mills, Inc., Balfour, N. C.

Lehigh Portland Cement Co., Mitchell, Ind.

Lenkurt Electric Co., San Carlos, Calif. Entire company.

Lever Brothers Co. Two Awards: Research Center and Lever House (7 plants); Pepsodent Div., Chicago.

Linde Air Products Co., Div. of U.C.C. Corp. Four Awards: Newark, N. J.; Los Angeles; Tonawanda, N. Y.; Indianapolis, Ind.

Manning Maxwell & Moore, Inc. Stratford (Conn.) Plant.

Marquette Cement Mfg. Co. Two Awards: Brandon Miss.; Cape Girardeau, Mo.

McDonnell Aircraft Corp., St. Louis, Mo.

Memphis Light, Gas and Water Div., Memphis, Tenn.

Metals Research Laboratories, Niagara Falls, N. Y.

Montgomery Ward & Co. Two Awards: Fashions, Chicago; Wardway Paint Works, Chicago Heights, Ill.

Monsanto Chemical Co., John F. Queeny Plant, St. Louis, Mo.

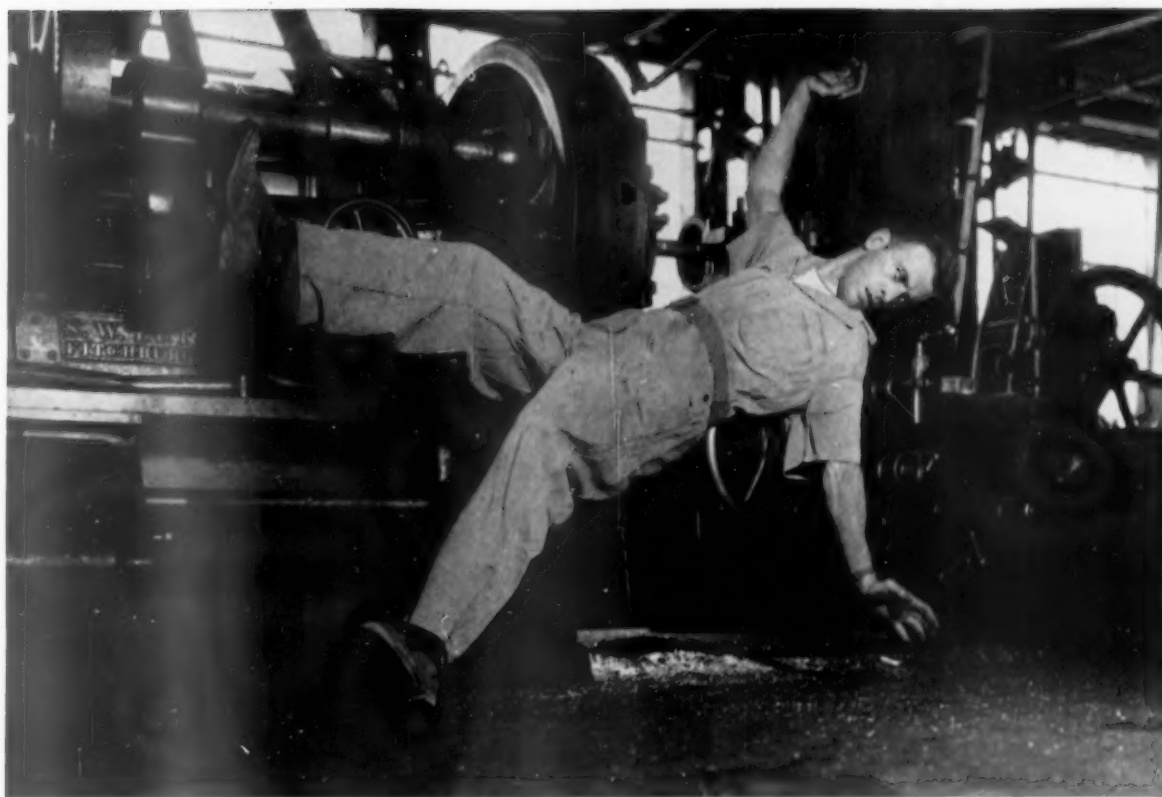
National Electric Products Corp., Ambridge, Pa.

National Distillers Products Corp. Four Awards: Hill & Hill Plant, Louisville, Ky.; Memphis (Tenn.) Barrel Plant; Sunny Brook Dist., Louisville, Ky.; Blending & Spirits, Ohio.

National Lead Co. of Ohio, Cincinnati, Ohio.

National Sugar Refining Co., Penn'a Sugar Div.

New Jersey Zinc Co., Titanium Pig-



According to the National Safety Council, falls kill about 55 persons *every day*—only traffic accidents cause more accidental deaths. One important factor in falls—slippery floors—can be eliminated if you use Wyandotte ZORBALL.

Stop falls caused by slippery floors— use ZORBALL all-purpose absorbent!

USE WYANDOTTE ZORBALL FOR:

Safer walking—ZORBALL keeps floors safe longer, protects workers.

Safer driving—ZORBALL provides better traction for lift trucks and rolling equipment.

Fire protection—ZORBALL is nonflammable, even when saturated with oil.

Steps and ramps—ZORBALL prevents falls in these dangerous areas.

Safety outdoors—ZORBALL skidproofs driveways and loading platforms.

Survey results are *shocking*: "Falls kill 19,000 a year!" . . . to say nothing of the serious injuries, the lost time, the lost work—

That's why it pays to be careful when it comes to floor safety: to avoid slipperiness due to oil, grease, water, or *any* liquids. These are *unnecessary* hazards that Wyandotte ZORBALL, the nonskid floor absorbent, eliminates with an effectiveness that is truly amazing!

ZORBALL absorbs oils, grease, whatever is making your floor slippery. ZORBALL keeps floors safe longer, because its rugged, angular particles resist breakdown. Actual crush tests prove ZORBALL remains effective more than twice as long as ordinary floor absorbents. ZORBALL is the safest, lowest use-cost floor absorbent on the market today!

Remember: the worst accidents are those that could have been prevented. Make sure *your* floors are safe with ZORBALL. Talk to your Wyandotte jobber or representative now! Wyandotte Chemicals Corporation, Wyandotte, Mich. Also Los Nietos, Calif. Offices in principal cities.

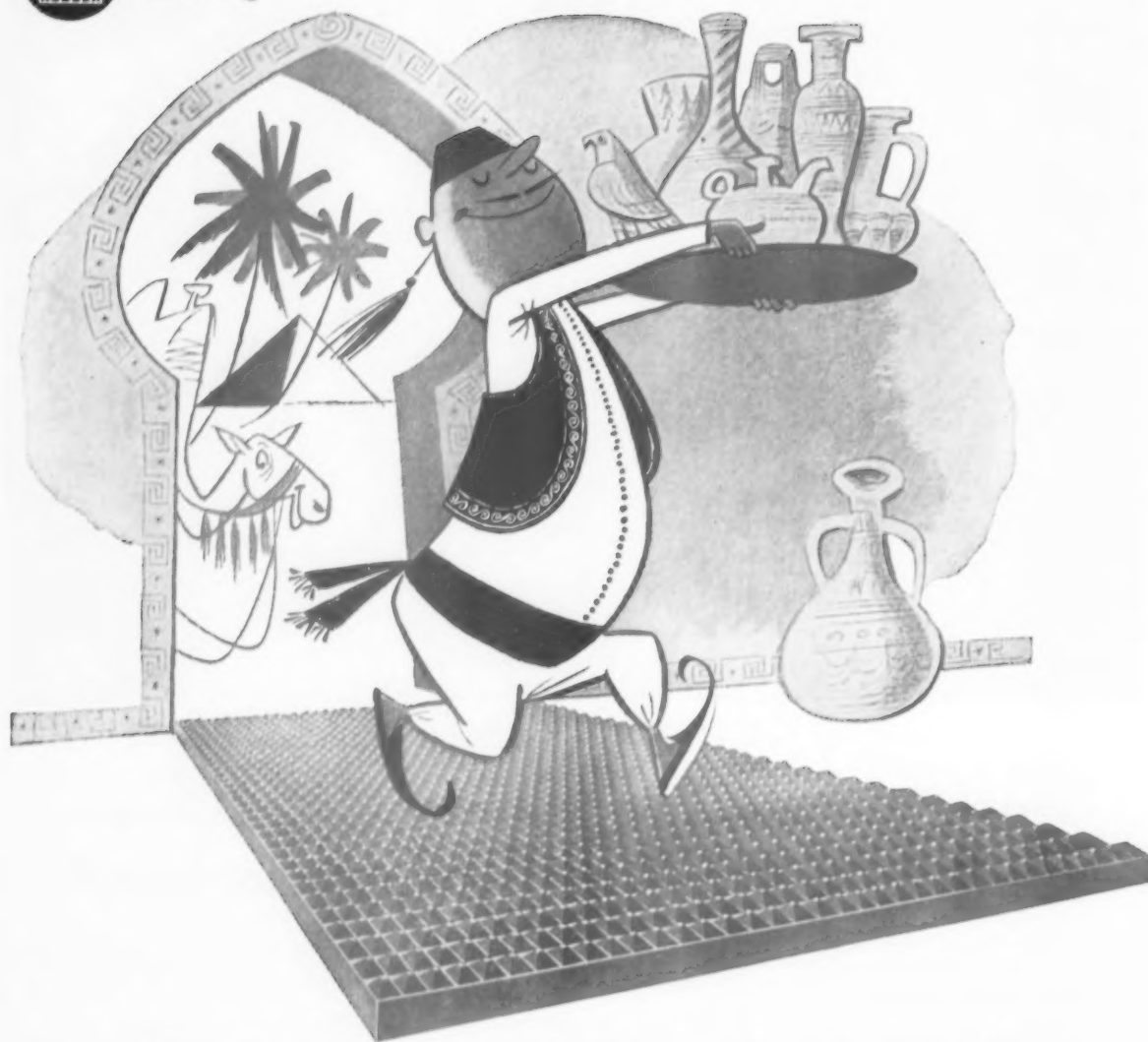


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Never fear, Abdul won't slip and break his assortment of antiques. He's walking on U. S. Pyramid Matting, the decorative rubber runner that's available in a choice of colors. It provides a non-skid surface for use in offices and public buildings—for any kind of footwear from sultan's slippers to workman's boots. U. S. Pyramid Matting has a specially compounded high quality rubber

fabric with rubber reinforcement to provide toughness and endurance. Easily maintained, it deadens noise, protects floors.

Obtainable at any of the 28 conveniently located "U. S." District Sales Offices, at selected "U. S." distributors, or write us at Rockefeller Center, New York 20, N. Y. In Canada, Dominion Rubber Co., Ltd.



Mechanical Goods Division

United States Rubber

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ments Div., Gloucester City, N. J.
North American Cement Corp., Catskill, N. Y.
Northwestern States Portland Cement Co., Mason City, Iowa.
Otis Elevator Co., Production Dept., Harrison (N. J.) Works.
Owens-Illinois Glass Co., Mill Div., Big Island, Va.
Pan Am Southern Corp., El Dorado (Ark.) Refinery.
Penn Dixie Cement Corp., Nazareth, Pa.
Pickands Mather & Co. Four Awards: Lake Mining Co., Hibbing, Minn.; Corsica Mine, Corsica Iron Co.; Erie Mining Co., Hibbing, Minn.; Sagamore Mine, Sagamore Ore Mining Co.
Pillsbury Mills, Inc. Two awards: Globe Mills Div., Astoria, Ore.; Clinton, Iowa.
Pioneer Gold Mines of British Columbia, Ltd., Pioneer Mine, B. C.
Pittsburgh Plate Glass Co. Four Awards: Works 6, Ford City, Pa.; Works 4, Ford City, Pa.; Springdale, Pa.; Southern Alkali Corp., Lake Charles, La.
Pollock Paper Corp., Waterproof Ohio Div., Columbus, Ohio.
The Pullman Co., Tampa District, Chicago.
Radio Corp. of America. Six Awards:

Mfg. Plants, Camden, N. J.; Lancaster, Pa.; Camden (N. J.) Plant; Indianapolis, Ind.; RCA Laboratories, Princeton, N. J.; Moorestown (N. J.) Engineering Plant.

Republic Steel Corp. Five Awards: Truscon Steel Co., Youngstown, Ohio; Union Drawn Steel Div., Massillon, Ohio; Truscon Steel Co., Cleveland, Ohio; Niles (Ohio) Steel Products Div.; Truscon Steel Co., Youngstown, Ohio.

Royal McBee Corp., Hartford (Conn.) Plants.

Fred Rueping Leather Co., Fond du Lac, Wis.

Jos. Schlitz Brewing Co., Milwaukee.

A. O. Smith Corp., Granite City (Ill.) Frame Plant.

A. E. Staley Mfg. Co., Decatur (Ill.) Plant.

Standard Lime and Cement Co., Woodville, Ohio.

Tennessee Coal & Iron Div., U. S. Steel Corp. Three Awards: Zinc Mines, Jefferson City, Tenn.; Fairfield (Ala.) Steel Works; Fairfield (Ala.) Tin Mill.

Thompson Products, Inc., Harrisburg, Pa.

Union Carbide & Carbon Corp. Six Awards: Carbide Power Co., Sault Ste. Marie, Mich.; Electro Metallurgical Co., Portland, Ore.; Linde Air

Products Co., Chicago Warehouse; Linde Air Products Co., Construction & Design, Tonawanda, N. Y.; Union Carbide Nuclear Co., Oak Ridge National Laboratory; Union Carbide Nuclear Co., Oak Ridge, Tenn.

United Aircraft Corp., Pratt & Whitney Aircraft Div., E. Hartford, Conn.

United Gas Improvement Co., Lancaster (Pa.) Div.

United Shoe Machinery Corp., Beverly, Mass.

Universal Atlas Cement Co. Three Awards: Northampton, Pa.; Hudson, N. Y.; Hannibal, Mo.

United States Forest Service. Two Awards: Entire U. S. Forest Service.

U. S. Rubber Reclaiming Co., Inc., Plant 2, Cheektowaga, N. Y.

U. S. Steel Co. Three Awards: National Tube Co., National Works, McKeesport, Pa.; Oliver Iron Mining Div., Soudan (Minn.) Mine; National Tube Co., Ellwood (Pa.) Works.

Valleydale Packers, Inc., Salem, Va.

Virginia Dept. of Highways, Richmond, Va.

Vogt Mfg. Corp., Rochester, N. Y.

Washington Gas and Light Co., Washington, D. C.

Western Electric Co., Inc. Three Awards: Denver Area of Telephone Sales Div.—Installation; Washington (D. C.) Area; Laureldale (Pa.) Shops.

3 MAJOR FLOOR MAINTENANCE BENEFITS IN 1 DRESSING...



1. EXCELLENT SLIP RESISTANCE

Readings obtained on the Underwriters' Laboratories' James Machine prove that Poly-Glo rates "excellent" on all floor surfaces tested.

2.

LABOR-SAVING EASE OF APPLICATION

Poly-Glo applies easily, dries in minutes to a tough, glossy film. It resists heel marking, dirt and water and will not yellow or discolor the lightest floors.

3.

SPARKLING BEAUTY WITHOUT BUFFING

Self-polishing Poly-Glo gives sparkling beauty without machine buffing. Damp mopping with cold water whisks off clinging dirt, will not remove Poly-Glo's protective film or lustre.

USE POLY-GLO . . . safely on all types of resilient, non-resilient and sealed wood floors!



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I'D LIKE A DEMONSTRATION PLEASE...

so I can see the safety and savings in Poly-Glo and the MYCO Method of Floor Care. Have one of your representatives contact me to arrange a convenient time.

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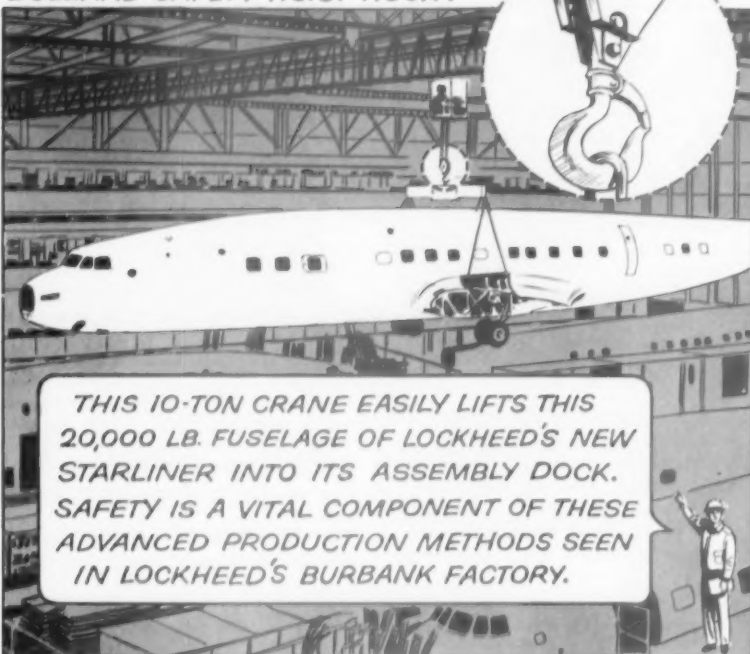
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BULLARD SAFETY HOIST HOOK!**



THIS 10-TON CRANE EASILY LIFTS THIS 20,000 LB. FUSELAGE OF LOCKHEED'S NEW STARLINER INTO ITS ASSEMBLY DOCK. SAFETY IS A VITAL COMPONENT OF THESE ADVANCED PRODUCTION METHODS SEEN IN LOCKHEED'S BURBANK FACTORY.

MEN AND MATERIALS AROUND LIFTING EQUIPMENT ARE PROTECTED BY BULLARD SAFETY HOIST HOOKS...



Pushbutton lock
With gate open hook's throat is 100% clear
Available in sizes 1 to 16A for all type hoists, tuggers and come-alongs. Write for safety hook data sheet.
E. D. Bullard Co., 2680 Bridgeway, Sausalito, California



Western Printing & Lithographing Co., Poughkeepsie, N. Y.
Weyerhaeuser Timber Co., Longview (Wash.) Sawmill.
Whitehall Cement Mfg. Co., Cementon, Pa.
Woodward Iron Co. Two Awards: Mulga, Ala.; Pyne Ore Mine, Lacey's Chapel, Ala.

CERTIFICATE OF COMMENDATION

Acme Steel Co. Two Awards: Racine (Wis.) Plant; Steel Strapping, Scarborough, Ont.
Allied Chemical & Dye Corp., Nitrogen Div., Orange, Tex.
Alpha Portland Cement Co., Manheim, W. Va.
Aluminum Co. of America, Tapoco, Inc., Alcoa Power Div., Calderwood, Tenn.
Amalgamated Sugar Co., Lewiston, Utah.
American Can Co. Seven Awards: Harbor Factory 107A, Wilmington, Calif.; Lubee, Maine; Hooperton, Ill.; Maywood (Ill.) Fibre Con.; Harrisburg, Pa.; Pacific Div. Lab, San Francisco; Research & Development Center, Barrington, Ill.
American Cyanamid Co., Damascus (Va.) Plant.
American Marietta Co., Northampton, Pa.
American Motors Corp., Evart (Mich.) Products Co.
American Radiator & Standard Sanitary Corp., Pittsburgh (Pa.) Works.
American Rock Wool Corp. Two Awards: Wabash, Ind.; Wabash (Ind.) Plant.
Arizona Portland Cement Co., Rillito, Ariz.
Ash Grove Lime & Portland Cement Co., Louisville, Neb.
Barium Products, Ltd., San Francisco.
Bayuk Cigars, Inc., Leaf Plant, Lancaster, Pa.
Borden Co. Two Awards: Anniston (Ala.) Branch; Florida Dist., Dothan, Ala.
California Portland Cement Co., Colton, Calif.
Canada Cement Co., Ltd. Two Awards: Ft. Whyte, Man.; Pt. Colborne, Ont.
Canadian Gypsum Co., Ltd., Hillsborough, N. B.
Celotex Co., Asphalt Roofing Prod., Cleveland, Ohio.
Certain Teed Product Corp. Two Awards: Dallas, Tex.; Western Gypsum Co., Sigurd, Utah.
Chrysler Corp., Automotive Body Div., Jet Plant, Van Dyke, Mich.
Coplay Cement Mfg. Co., Coplay, Pa.
Continental Can Co., Inc., Robert Gair Div., Richmond, Va.
Denver & Rio Grande Western RR Co. Two Awards: Special Service Dept., Denver, Colo.; Communications Dept., Denver, Colo.
Douglas Oil Co. of Calif., Paramount, Calif.

E. I. du Pont de Nemours & Co., Inc.
Twenty-five Awards: Hall of Records; Petroleum Lab., N. J.; Fairfield (Conn.) Plant; Birmingham Plant, Watson, Ala.; Burnside Lab., Carneys Point, N. J.; Chicago Plant; Everett (Mass.) Plant; Montague Constr., Wilmington, Del.; May Construction, Wilmington, Del.; Antioch Constr., Wilmington, Del.; Old Hickory Construction; Edge Moor (Del.) Construction; Newport (Del.) Const.; Pioneering Lab., Henry Clay, Del.; Plant Research Lab.; Repauno Process Laboratory; Dacron Research Laboratory; Haskell Lab.; Pigments Research Lab., Del.; Beaumont Works, Mathionine Mfg.; Toledo (Ohio) Electrochemical; Akron (Ohio) Lab.; Dresden Plant, Pen Yan, N. Y.; Ecorse (Mich.) Plant; Du Pont Country Club, Wilmington, Del.

Flintkote Co. Two Awards: Whippany, N. J.; Mount Carmel, Ill.

Funkhouser Co., Delta, Pa.

General Cigar Co., Inc. Two Awards: Mahanoy City (Pa.) Stemmer; Chester Branch, Lancaster, Pa.

General Electric Co. Seven Awards: Conneaut Base Works, Conneaut, Ohio; Irmo Capacitor Plant, Hudson Falls, N. Y.; Glass Mach. Works, Cleveland, Ohio; Service Shops Dept., Youngstown, Ohio; Service Shops Dept., Schenectady, N. Y.; Miniature Lamp Dept., Cleveland, Ohio; Jefferson (Ohio) Welds Works.

General Portland Cement Co., Chattanooga, Tenn.

General Shoe Corp. Three Awards: Hohenwald, Tenn.; Nashville (Tenn.) Warehouse; Camden, Tenn.

Ideal Cement Co. Three Awards: Baton Rouge, La.; Florence, Colo.; Spokane, Wash.

International Refineries, Inc., Wrenshall, Minn.

Johns Manville Corp., Marrero (La.) Plant.

Jones & Laughlin Steel Corp. Eight Awards: Research Labs., Pittsburgh, Pa.; Toledo (Ohio) Container Div.; New Orleans (La.) Container Div.; Memphis (Tenn.) Warehouse; Pittsburgh (Pa.) Warehouse; Cincinnati (Ohio) Warehouse; Hamilton Warehouse, Cleveland, Ohio; Bayonne (N. J.) Container Div.

Kaiser Aluminum & Chemical Corp. Two Awards: Moss Landing, Calif.; Newark, Ohio.

Kimberly Clark Corp., Tech Research Lab., Neenah, Wis.

Lehigh Portland Cement Co. Two Awards: Coplay, Pa.; Sandts Eddy, Pa.

Lever Brothers Co. Two Awards: Edgewater, N. J.; St. Louis, Mo.

Libby, McNeill & Libby. Two Awards: Hammond, Ind.; Leipsic, Ohio.

Lion Oil Co., Div. of Monsanto Chemical Co., General Service Dept.

Lobl Mfg. Co., Middleboro, Mass.

Maytag Co., Hampton (Iowa) Plant.

Medusa Portland Cement Co. Two



There's a BIG difference in floor absorbents MAKE THIS DISCOVERY!

RIGHT IN YOUR OWN OFFICE you can test the difference of Eagle-Picher Industrial Floor-Dry with whatever oil absorbent you're now using. You'll discover it actually absorbs as much as 100% or more liquid per pound than other floor drying materials.

YOU'LL ALSO PROVE that Eagle-Picher Floor-Dry retains its skid-proof granular mineral form even when saturated. It doesn't mud or pack. Light in weight, it spreads easier and covers a larger area. Non-combustible, it has no chemical reaction. And possessing unusual reflective power, Floor-Dry makes working conditions bright and pleasant, as well as safe!

Since 1843



WRITE TODAY. Our Eagle-Picher representative will bring the portable laboratory to your office where you may make this test yourself. The Eagle-Picher Company, Cincinnati 1, Ohio.



Circle Item No. 72 - Reader Service Card

you can cut your GLOVE COSTS



with the authorized **JOMAC** COST-REDUCTION PLAN

- 1 Jomac will analyze your working conditions and glove requirements
- 2 You will receive a complete report and specific Jomac Glove recommendations
- 3 Test and compare the Jomacs with your present gloves—and the net cost figures speak for themselves

Your glove costs *can* be reduced. To make *profitable* use of this plan, write to Jomac Inc., Dept. D, Philadelphia 38, Pa., and say "Reduce my glove costs."

JOMAC INDUSTRIAL GLOVES

Plants in Philadelphia, Pa., and Warsaw, Ind.

In Canada: Safety Supply Company, Toronto

Circle Item No. 73—Reader Service Card

Awards: York, Pa.; Bay Bridge, Ohio.

L. Carlton Mertz Co., Chicago.

National Distillers Products Corp. Four Awards: New Orleans; Chicago; Bellows Plant, Louisville, Ky.; Dist. & Bottling, Cincinnati, Ohio.

North American Coal & Dock Div., Duluth, Minn.

Northern Pacific Railway Co., Livingston (Mont.) Shops.

Olympic Portland Cement Co., Ltd., Bellingham, Wash.

Owens Illinois Glass Co., Mill Div., Big Island, Va.

Penn Dixie Cement Corp. Three Awards: Clinchfield, Ga.; Plant 6, Bath, Pa.; Richard City, Tenn.

Peerless Cement Corp., Port Huron, Mich.

Pickands Mather & Co. Three Awards: Mahomen Mine, Cuyuna Ore Co.; Erie Lab., Erie Mining Co.; Carmi Carson Lake Mine, Utica Mining Co.

Pillsbury Mills, Inc. Three Awards: Wichita, Kan.; Wellsburg, W. Va.; Nashville, Tenn.

Pittsburgh Coke & Chemical Co., Pittsburgh, Pa.

Pittsburgh Plate Glass Co. Six Awards: Ford City (Pa.) Shop 2; Works 3, Creighton, Pa.; Paint Brush Div., Springdale, Pa.; Portland, Ore.; Forbes Finishes Div., Cleveland, Ohio; Houston, Tex.

Port of New York Authority. Two Awards: Port of Authority Bus Terminal, New York; Staten Island Bridges, Staten Island, N. Y.

Powhatan Mining Co., Fulton Mine, Jewett, Ohio.

The Pullman Co. Ten Awards: Kansas City District; Seattle District; Denver District; Little Rock Agency; Oklahoma City Agency; Shreveport Agency; Augusta-Charlotte Agency; Richmond District; Ogden District; San Antonio District.

Radio Corporation of America. Two Awards: Detroit (Mich.) Plant; Waltham, Mass.

Ralston Purina Co., Feed Mfg., Iowa Falls, Iowa.

Republic Steel Corp. Three Awards: Niles Steel Products Co., Elyria, Ohio; Union Drawn Steel Div., Hartford, Conn.; Chain Plant, Cleveland, Ohio.

F. S. Royster Guano Co. Two Awards: Lynchburg (Va.) Plant; Jackson (Miss.) Plant.

Scott Paper Co., Marinette Paper Co. Div., Glen Falls, N. Y.

Joseph E. Seagram & Sons, Inc. Six Awards: Old Lewis Hunter Dist. Co., Cynthia; Old Colonel Dist., Midway, Ky.; Blair Distilling Co., St. Francis, Ky.; Old Farmers Dist., Inc., Athertonville; Calvert Dist. Co., Pine Bluff, Ark.; Milan, Ind.

Southern Lumber Co., Potlatch Forests, Inc., Warren, Ark.

Southern Pacific Co. System, Maintenance of Way Shop, San Francisco.

Southwestern Portland Cement Co., Fairborn, Ohio.

Standard Lime and Cement Co., Knoxville, Tenn.

Superior Portland Cement, Inc., Seattle, Wash.

Sylvania Electric Products, Inc. Two Awards: Lighting Div., Winchester, Ky.; Mech. Develop., Salem, Mass.

Tennessee Coal & Iron Div., U. S. Steel Corp. Ten Awards: Edgewater (Ala.) Coal Mine; Washers (coal mines); Engineering and Construction, Fairfield, Ala.; Delonsh Quarry, Bessemer, Ala.; Central Shops, Bessemer, Ala.; Short Creek Mine, Adamsville, Ala.; Hamilton Mine, Pratt City, Ala.; Bessemer (Ala.) Rolling Mill; Ore Conditioning & Sintering Plant; Central Water Works, Edgewater, Ala.

Tidewater Construction Corp., West Point, Va.

Union Carbide & Carbon Corp., Linde Air Products Co. Thirty-two Awards: Erie (Pa.) Oxygen Plant; Dallas, Tex.; Buffalo, N. Y.; New York; Duquesne Plant, Fairmont Warehouse; Altoona (Pa.) Combination Plant; Allentown (Pa.) Combination Plant; Youngstown (Ohio) Oxygen Plant; Ashtabula (Ohio) Oxygen Plant; Baltimore (Md.) Oxygen Plant; Pittsburgh (Pa.) Combination Plant; Acetylene Plant, So. Charleston, W. Va.; Denver (Colo.) Acetylene Plant; Combination Plant, Charlotte, N. C.; St. Louis (Mo.) Acetylene Plant; Duluth (Minn.) Acetylene Plant; Cincinnati (Ohio) Oxygen Plant; Cleveland Oxygen Filling Station; Grand Rapids (Mich.) Oxygen Plant; Mobile (Ala.) Combination Plant; Salt Lake Oxygen Plant and Pocatello Filling Station; Savannah (Ga.) Oxygen Plant; Casper (Wyo.) Combination Plant; Wichita (Kan.) Oxygen Plant; Berkeley Oxygen Plant, Oakland Warehouse; Los Angeles Oxygen Plant; Combination Plant, North Haven, Conn.; Speedway Acetylene Plant, Indianapolis; New Orleans Oxygen Plant and Baton Rouge Filling Station; Harrisburg (Pa.) Combination Plant; Kittinging (Pa.) Oxygen Plant; Flame Plating Prod., Indianapolis.

Union Carbide and Carbon Corp., Union Carbide Nuclear Co. Two Awards: Mining Dept., Uravan, Colo.; California Mill.

Union Carbide Canada Ltd. Four Awards: Toronto (Ont.) Gas Plant; Sault Ste. Marie Plant, Toronto, Ont.; Montreal Acetylene Plant, Toronto, Ont.; Winnipeg Plant, Boniface, Man.

United States Forest Service. Two Awards: Entire U. S. Forest Service.

United States Gypsum Co., River Rouge, Mich.

U. S. Steel Corp., Limestone & Chemical Co., Cedarville (Mich.) Quarry.

U. S. Steel Corp., Oliver Iron Mining Div. Six Awards: Pilotac Mine, Iron Mountain, Mich.; Arcturus Mine, Coleraine, Minn.; Exakta Plant, Vir-

want quality slings?

The slings you use have to be the best. There's too much at stake—the safety of your crew, your equipment and the material they're handling. How can you make sure that the slings you have are the best available? Ask your supplier these questions:

Does the maker produce his own steel?



Then does he carefully test the results?



Does he process this superior steel into top-quality wire?

Then does he carefully test the results?

Does he make this superior wire into top-quality wire rope?



Then does he carefully test the results?



Does he fabricate this superior wire rope into top-quality slings?

Then does he carefully test the results?

If you receive even a single "no", it'll pay you to get the Wickwire story . . . to see how Wickwire Wire Rope Slings are made—from blast furnace to testing of the completed sling—by a single company with over a century and a quarter of wire-making experience. Contact the nearest sales office below today.



**WICKWIRE
WIRE ROPE SLINGS**

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

4236

THE COLORADO FUEL AND IRON CORPORATION—Denver • Houston • Odessa (Tex.) • Phoenix • Salt Lake City
Tulsa • PACIFIC COAST DIVISION—Los Angeles • Oakland • Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION—Boston • Buffalo • Chattanooga • Chicago • Detroit • Emmenton (Pa.)
New Orleans • New York • Philadelphia • CF&I OFFICES IN CANADA: Toronto • Montreal

Circle Item No. 74—Reader Service Card

ginia, Minn.; Mt. Iron (Minn.) Crushing Plant; Mt. Iron (Minn.) Concentrating Plant; Godfrey Mine, Chisholm, Minn.

Van Dusen Harrington Co., St. Anthony.

Virginia Carolina Chemical Corp. Four Awards: Jacksonville, Fla.; Greenville, S. C.; Nichols (Fla.) Concentrate Plant; Lynchburg, Va.

Warneke Paper Box Co., Denver, Colo.

Wilson Paper Box Co., Inc., Richmond, Va.

Standards Needed for Nuclear Progress

INDUSTRY'S reluctance to invest capital in nuclear installations is due to lack of uniform standards in the field, according to Morehead Patterson, chairman of the board and president, American Machine and Foundry Company, New York. Mr. Patterson's views appear in *The Magazine of Standards*, official monthly publication of the American Standards Association.

"The nuclear field is looked upon as so dangerous," he said, "that

we cannot afford to be without standards. In spite of the remarkable record of safety which has been achieved, there is still fear that we do not yet know the long-time effects from exposure to radioactivity, and fear that a power reactor will explode like a time bomb."

To satisfy the demands of organized labor and insurance companies for uniform standards which are urgently needed as a basis for settling workmen's compensation and so-called third party insurance claims, he said that it is vital that American Standards, which are entirely voluntary, be developed by industry at all expedience.

The legal profession is also vitally interested in having something to go by in the adjudication of possible damage suits.

He warned that unless nuclear standards are arrived at through the consensus principle of the American Standards Association, with wholehearted cooperative effort on the parts of the states, the Federal Government, and indus-

try, the confusion will be worse than the divorce laws of the 48 states.

Mr. Patterson reviewed what has been done in developing national standards through the American Standards Association. He is chairman of the Nuclear Standards Board of ASA, a group of technical experts representing all groups concerned with the application of atomic energy to industrial uses.

The ASA, United States member of the 38-country International Organization for Standardization, has just accepted the secretariat for the new international committee on nuclear energy, ISO/TC 85. The committee will hold its organization meeting July 29 to August 1 at Geneva, Switzerland.

Minister to congregation: "I have always said that the poor are welcome in this church, and I see by the collection plate that they have come."



Maximum SAFETY plus SAVINGS

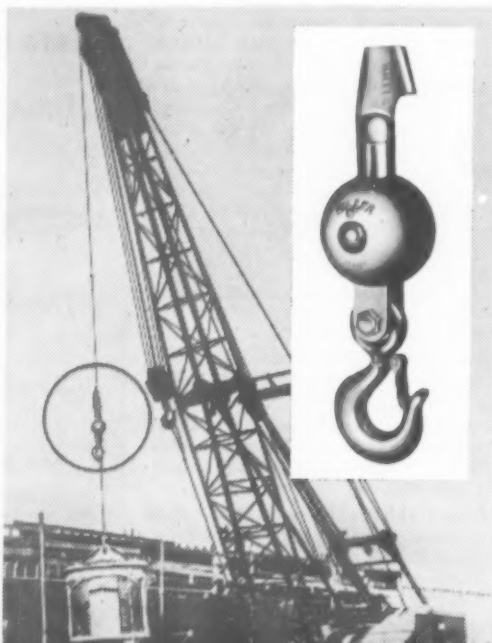
1. Matched set of angular contact bearings.
2. Practically friction free.
3. Seal keeps grease in, foreign matter out.
4. Faster hoisting due to non-spinning loads.
5. Faster load placement due to easy load turning.
6. Faster rigging due to elimination of cranky wire rope performance.
7. Elimination of twists and kinks means longer wire rope life.
8. Safer load placements due to non-spinning loads.

21 standard types available from ½ ton to 250 ton working load



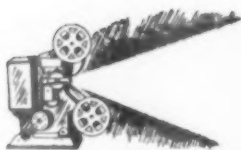
GENERAL MACHINE & WELDING WORKS INC.

1100 East Second St., Pomona, Calif.



MILLER SWIVELLING HEADACHE BALL

Swivel properly located to absorb twisting effect of wire rope and eliminates spinning loads. Available in four types: Clevis, Eye, Wedge and Thimble. 65-450 pounds, 5-30 Ton Capacity.



FILM NEWS

By Nancy Lou Blitzen, Public Information Department, NSC

Two Films for Loggers

The Lumbermen's Safety Association of Ontario has released two new films dealing with logging. Neither of these films has yet been reviewed in the NSC office, but descriptions of both were sent to us.

The first, *Stretcher Case*, runs about 8 minutes. It is a color movie giving instructions on how to construct a stretcher in the woods from materials at hand. Poles are made from small trees and coats and jackets are used for the bed. The instruction is detailed and, to keep up interest, a small story is woven around the subject.

Bushmaster is a 10 minute color

movie dealing with the safe operation of power (chain) saws. The instructions are given in a story of a man doing everything the wrong way and finally receiving instructions from an experienced cutter on the correct and safe methods of operating the saw. Incorrect methods are contrasted with correct and safe methods.

Both films are available for purchase from Lumbermen's Safety Assn., 90 Harbour Street, Toronto, Ont., Canada. Both were released in the latter part of 1956.

Foggy Worker

Beware The Fog is a Hardware Mutuals production in color which was released the same time

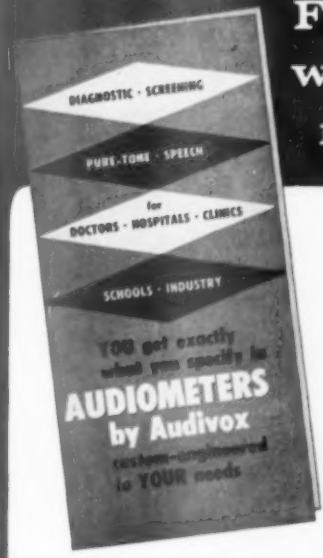
as their award-winning *Take It Away* (reviewed in May 1957 NATIONAL SAFETY NEWS). This 10½-minute film-strip and record is about the worker who is always safe on the job, but forgets all about it when he's not working.

How such a safety-conscious person on the job can get involved in such simple accident situations on his own time stretches credibility a bit. But the theme of the production is that it's necessary to be safety conscious all the time, not just while on a specific job.

The film was produced by Vogue-Wright Studios and is available for purchase from Dallas-Jones Productions, 1725 N. Wells, Chicago. Loan prints can be obtained from Hardware Mutuals agents or from Hardware Mutuals Insurance Cos., 200 Strongs Ave., Stevens Point, Wis.


First Aid and Fire Inspectors

The National Film Board of Canada has available two exceptionally fine films—one on first aid for air force personnel and



FREE FOLDER tells the best way to protect your company from costly deafness claims

YOU MAY SAVE your company thousands of dollars from deafness claims and needless accidents with an Audivox Audiometer. This sensitive instrument to measure the hearing power of your employees is low in initial cost and low in maintenance cost, it's compact and light, it's simple to operate, and will give years of trouble-free, accurate service. Write for free folder, today.



AUDIOMETERS BY
audivox
 SUCCESSORS TO *Western Electric* HEARING AID DIVISION

Audivox, Inc., Dept. SJ4,
 123 Worcester St., Boston, Mass.

Gentlemen:

Please send me the free folder with detailed information about Audivox Audiometers.

Name.....

Firm.....

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City..... Zone..... State.....

Circle Item No. 76—Reader Service Card

the other on the work of a fire inspector.

First Aid For Air Crew is probably one of the most realistic movies on first aid on-the-spot techniques I've seen. It's in full color and runs about 28 minutes. It is a dramatic production with the instruction woven around the story of an aircraft forced by engine trouble into a crash landing. (This sequence alone is worth seeing.)

All the crew are injured, but one is able to administer first aid

to the others because his injuries are only superficial. The others have more serious injuries, such as a punctured lung, cut artery, compound fracture, etc.

These wounds are so realistically pictured that the artery spurts blood, the intestine is seen in a stomach wound, the lung puncture is a sucking wound, and the bone is seen sticking out in the fracture (this is not a film for viewers with weak stomachs). One man even has a suspected broken back or neck.

The film shows how just enough first aid is administered to stop bleeding, keep out infection and keep the men alive and relatively comfortable until the rescue party finds them. At no time is anything done which could be considered "treatment" of the injuries in the strict medical sense. Only shock is actually treated.

Although military personnel are shown in the movie, it could be used for civil defense groups, any disaster first aid teams, etc.

Perspective: Go To Blazes is the title of the second NFBC film. It also runs 28 minutes, but is available only in black and white.

It tells the story of the day-by-day activities of a city fire inspector (Canadian) as he investigates businesses, homes, causes of fires, and hazards which could cause fires or explosions. His problems with individuals and his methods of handling situations (plus the fact that the acting and photography are very good) make the film interesting.

Most of the situations shown would apply to U. S. city inspectors, but there are probably a few exceptions.

As much attention is given to commercial establishments (both legitimate and fly-by-night), industrial audiences might find this interesting. Certainly it could be shown to general audiences, civic groups and fire departments, etc.

In Canada, both films can be purchased from National Film Board of Canada, Commercial Division, 3255 Cote de Liesse Rd., P.O. Box 6100, Montreal 3, P. Q.

The first film is distributed in the U. S. by NFBC's New York office at 630 Fifth Ave., New York, on a purchase basis.

The second film is distributed for purchase and rental by the Bureau of Communications Research, Inc., 13 E. 37th St., New York 16.

Teacher: "Bobby, this is the fifth day I've had to ask you to stay after school. Now, what do you have to say for yourself?"

Bobby: "Im glad it's Friday."

An egotist is a fellow who is usually me-deep in conversation.

ask the man who wears

SUPERGARD

he'll give these reasons for its popularity

- . . . "more comfortable fit"
- . . . "cool, ventilated suspension"
- . . . "easy to clean and sterilize"
- . . . "interior and exterior eye appeal"



These and many other features make SUPERGARD the Hat and Cap preference of workmen who have had the opportunity to wear it.

Available in colors: white, gray, red, yellow, green, blue, brown—send for catalog, try it and you'll be convinced.

The BOYER-CAMPBELL Company

6548 St. Antoine

Safety Division

Detroit 2, Mich.

Circle Item No. 77—Reader Service Card

For a More Successful Poster Program

POSTER program aids miniaturized on this and the following pages are NEW — shown here for the first time. Those illustrated in one color are actually printed in two or more colors.

Also, be sure to refer to the new 1957 Directory of Occupational Posters which contains an excellent selection of 756 posters on a great variety of subjects.

Copies of the new Directory are available at 60 cents each.

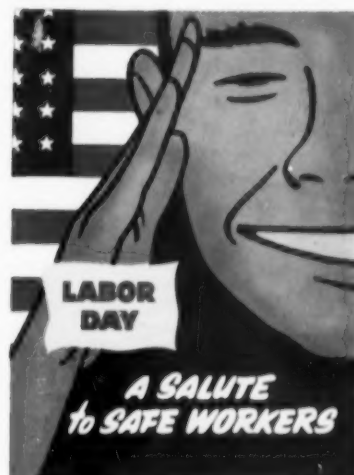


JUMBO POSTER for SEPTEMBER 1957

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on an annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

SAFETY BANNER FOR SEPTEMBER, 1957

Here is the attention-getting, monthly cloth banner. Available in two types—indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-color design. Indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill, with wind vents, and has strong stitched-in rope for durability.



POSTER 1101-A

1101-A

8 1/2 x 11 1/2

This new four color poster is illustrative of the 72 four color posters shown in the 1957 Poster Directory.



NATIONAL SAFETY COUNCIL

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)



PRINTED IN U.S.A.
© NATIONAL SAFETY COUNCIL

0744-A

8½x11½



PRINTED IN U.S.A.
© NATIONAL SAFETY COUNCIL

0976-B

17x23



PRINTED IN U.S.A.
© NATIONAL SAFETY COUNCIL

1039-A

8½x11½



PRINTED IN U.S.A.
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1061-A

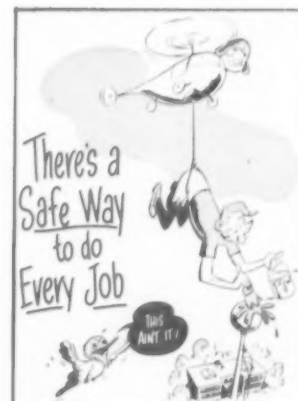
8½x11½



PRINTED IN U.S.A.
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1080-A

8½x11½



PRINTED IN U.S.A.
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1058-A

8½x11½



PRINTED IN U.S.A.
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0941-B

17x23



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1022-A

8½x11½



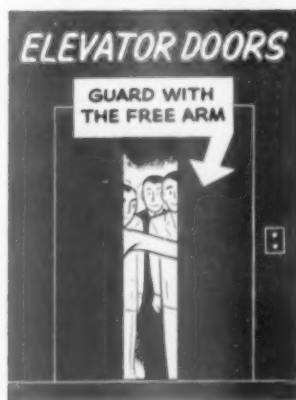
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1115-B

17x23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Posters below are printed in two or more colors
(Available only in sizes indicated)



1093-A 8½x11½



0883-A 8½x11½



1005-B 17x23



1018-A 8½x11½



1004-B 17x23



1063-B 17x23



T-1090-C 25x38
T-1091-A 8½x11½



T-1075-B 17x23



V-1096-A 8½x11½

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Diary

—From page 6

down the bank to the detriment of my pants, and asked him what the score was. He gave me the picture in five sentences, and then he and I scrambled back up the bank and studied the tracks the dozer had made. In two minutes I went back to the boys and said, "Let's go back to the office."

In the office I took time to get the mud off my trousers, I sent

my secretary off on an errand, and then I started in on the boys.

"Look," I said, "I'm not blaming you, but you've got to start learning fundamentals, and this accident gives us a good starting point for a lecture on accident investigation."

"First of all, remember that time is important. That's true, not just because there's always more work to be done than you have time for, but also because all evidence on accident causes has a

tendency to evaporate rapidly. Physical evidence gets washed out by rain, or obliterated by the crowd, or eliminated by the resumption of operations. The evidence of witnesses gets distorted by hearsay, by the human tendency to guess and exaggerate, and by second thoughts of men who start to think that it might help a friend or harm an enemy to color the facts.

"I think I can reconstruct what you two did. By the time you arrived, there was a crowd around the scene, gawking, talking, putting out theories as facts, and repeating other people's guesses as gospel truth."

"First you joined the crowd around the injured man, forming your own hunches as to the degree of injury. Since you weren't there early enough to help him physically, you were wasting your time, because the hospital report will give us precise information on the injury. After the ambulance took him away, you stayed in the crowd and tried to assimilate evidence from all and sundry, and what you got, of course, was confusion and misinformation."

"You didn't know Johnny Blake, of course, but if you had used your heads you would have spotted him as a foreman by what he was doing, and even by his appearance, and the reaction of the men to him. You should have gone to him, not necessarily as a perfectly informed witness, but as a guy much more likely to know the score than the crowd members."

"When you had his story, you should have done what I did—checked it against the physical



Safe . . . because the walking surface of Vul-Cork's Micro-Cell Cushion Neoprene is made up of hundreds of split cells, which act as vacuum cups on any walking surface.

Comfortable . . . because Vul-Cork's Micro-Cell Cushion Neoprene is actually 40% lighter on the average than other conventional neoprene composition soling materials.

Completely non-absorbent, too, with its gas filled cells providing not only a pneumatic cushioning but acting as an insulating barrier keeping out water, vapors and heat or cold.

Vul-Cork Micro-Cell Cushion Neoprene soles are used on the best work shoes made.

Write for free booklet describing all Vul-Cork soles . . . one of which is sure to answer your safety problems.

Vul-Cork Sole Division, Cambridge Rubber Co., Taneytown, Md. Makers of **Vul-Cork**®

VUL-CORK & VUL-CORK NEOPRENE

so light, so flexible, so resilient you can roll them up . . . right in the palm of your hand.

Circle Item No. 78—Reader Service Card



"I see the shop joker told our new man how to clean out his machine when it gets stopped up."



A new employee gave us the idea...

Several weeks ago, a young chap being processed by our personnel people—you know, for insurance, hospitalization and so forth—asked whether our company had a Payroll Savings Plan for U. S. Savings Bonds.

This simple question made us realize that while we had a Payroll Savings Plan available we had not promoted it lately among our employees.

We contacted the State Director of the Savings Bonds Division of the U. S. Treasury and discussed this matter. He helped us work out a promotion plan to contact every employee on the Payroll, and thereafter, each new employee we hired. He supplied literature,

posters and so forth and helped train the canvassers to do an educational promotion among our employees.

In a short time, with practically no disruption of our business, our campaign was successful. The enthusiastic response floored us. This proved to us employees *want* to save part of their pay and they welcome the convenient Payroll Savings Plan for buying U. S. Savings Bonds.

Your State Director, Savings Bond Division, U. S. Treasury Department, will be glad to help you install The Payroll Savings Plan, or build participation in an existing plan. Write: Savings Bonds Division, U. S. Treasury Department, Washington 25, D. C.

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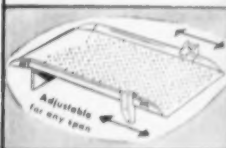


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Circle Item No. 79—Reader Service Card

evidence. That would have established that he was giving you the straight facts. Then you could have left.

"Instead of that, you stood around, absorbing confusion and contributing to it, by giving the impression that the safety department was a sharer in and giver of credence to gossip."

The boys looked properly humbled and chastened. After a moment, Lee looked up and asked, "What was the accident cause?"

"You can select what you want of several things," I replied. "The operator was a new hand—a farm kid used to tractors for plowing. Call it bad training if you want, but Blake says he's been trying to call his men on running too close to that bank. Anyway, this man did run too close, and the soft dirt gave under the dozer. Luckily, it only tipped and didn't roll all the way over."

Jim came up with another question: "How do we correct the situation?"

I answered quickly, with a positiveness designed to impress the

boys, and which was only about half faked: "Call the dozer operators together for a safety meeting. Give them the facts on this accident, and then a stiff shot in the arm on three or four major hazards in dozer operation."

"Including running too close to soft banks," said Lee.

"Not including that," I said. "That point is sufficiently made, underlined and dramatized in the men's minds. No, I'll hit hard at the other problems, picking up some punch and emphasis for them by association with this incident."

Jim said thoughtfully, half to himself, "Detective, reporter, teacher, propagandist, psychologist—so we've got to be all those things."

I snapped out, "All those, and nursemaid, accountant, politician, first-aid man, entertainer, statistician—and so forth and so on. You've got to be all those and more!"

Jim said, "And what about engineering?"

I laughed and said, "What did

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As the writer in "Modern Sanitation" says—one Washfountain serves more users quickly—being equal to 8 to 10 individual basins.

There are no contaminating faucet contacts, the foot-ring controls water supply. The bowl is self-flushing so there is never left-over unsightly water residue. Space is saved, installation time and costs are reduced because only three piping connections are required—two supply lines, and one drain and vent.

Catalog 5601 shows all models complete with specifications. Copy will be mailed gratis . . . BRADLEY WASHFOUNTAIN CO., 2237 W. Michigan St., Milwaukee 1, Wisconsin.

— more users can be served in quick succession so that one such fixture is the equal of eight to ten individual (so-called) fixtures.

Economical Choice

AMONG its other advantages, the washfountain requires less floor space, leaves walls clear, and has only two water lines and one drain and vent in contrast to the sixteen lines and faucets and the drains and stoppers on eight lavatories. Initial installation of rough plumbing is simpler and less costly; the routine cleaning of the fixture is easily and quickly done. The water temperature can be thermostatically controlled if there are serious fluctuations in hot water temperature or pressure. The saving of about 25 per cent in floor space and the substantial savings in daily maintenance through the life of the equipment therefore make the washfountain an economical choice.



BRADLEY
washfountains

Circle Item No. 80—Reader Service Card

engineering have to do with your carrying a chain on a survey crew last summer? No, boy, no engineering yet. You learn to inspect, to investigate, to teach, to wheedle, and the other routines, and then there'll come a time when you'll be an engineer—when you'll have to be a darned good engineer! But not yet. Learn to walk first. There'll be enough flying to do later."

Sprinklers on Guard

—From page 66

Water spray systems are used to protect oil-filled electric equipment, such as transformers, oil switches and oil piping and open tanks of flammable liquids. To be effective, water spray systems require expert installation.

Other systems for limited and specialized occupancies use vaporizing liquid, steam and inert gases. For processes like paint dipping and tank operations using flammable liquids, a manually or automatically operated cover is an

effective means of extinguishment.

Obstructed Piping

A plant's fire protection system may be crippled when scale, stones, or other foreign material are allowed to enter or remain in the sprinkler system. Should a fire occur, discharge from the sprinkler heads would be insufficient to check the blaze.

Regular examinations can determine whether the system contains an excessive amount of foreign material. Methods include observations of the flow from the test connection on top of the system, drain tests at sprinkler risers, or hydrant flow tests.

Uncoupling the piping at strategic points and examining the interior, or test flushing of representative feed or branch lines will reveal obstructions. Examination may show individual sprinklers to be clear but that does not necessarily mean the branch lines are clear.

Common obstructions are pipe scale, mud, sand, small stones, cinders, and chips.

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Wire from Washington

—From page 17

highway system, was approved by the Public Roads subcommittee of the Senate Public Works Committee, on an incentive plan basis. (See "Wire," May 1957.)

A House Interstate and Foreign Commerce Subcommittee held hearings on H.R. 5416 (Roberts), to provide for grants-in-aid to states for driver-education. S. 2173 (Hill) was introduced along similar lines in the Senate.

The House subcommittee also held hearings on other highway traffic safety bills including: H.R. 5280 (speed governors); H. C. Res. 26 (uniform traffic laws); H.R. 561 (safety devices); H.R. 793 and 794 (manufacturer's fitness certificate); H.J. Res. 221 (interstate compacts to promote highway traffic safety), and H.J. Res. 297 (Federal Motor Vehicle Commission).

Congressman Roberts also introduced H.R. 7882, to provide that seat belts sold or shipped in interstate commerce for use in motor vehicles shall be required to meet certain standards established by the Secretary of Commerce.

The Federal Highway Administrator reported that motor vehicle registrations during 1956 totalled 65,212,510, a 4 per cent gain over 1955. The Commissioner of Public Roads and the President's Committee for Traffic Safety stressed the safety advantages of planned access and other aspects of modern highway design in new highway construction.

Aviation. Both the Senate and the House held hearings on the Administration's proposals for an Airways Modernization Board to meet the needs for safe and efficient air navigation (S. 1856 and H.R. 6872). Presidential Assistant for Aviation Edward P. Curtiss, who originated the proposals, told Congressional leaders that the nation had already passed the point where its aviation facilities can safely and efficiently handle all planes wanting to fly.

The House sponsor of the Administration bill, Congressman Haskell, deplored today's "extremely serious" air traffic situation, and made special reference to the inadequate control system. He told the Congress that according to CAB information, out of 452 near collisions reported to the CAB last fall as having occurred within 4 months, 101 were over the nation's largest metropolitan areas and an additional 155 incidents over other principal cities.

He proposed a five-point program: (1) more and better CAA radar; (2) electronic flight posting equipment for CAA; (3) more CAA staff; (4) enlargement of airport facilities; (5) anti-collision warning devices on planes.

Government. The Senate Subcommittee on Federal Employee Compensation held hearings on various proposals for increased salaries for Federal employees. One such bill, S. 1326, would establish a separate Scientific and Professional Classification within the Federal Civil Service, but failed to include safety engineers

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and fire protection engineers within its coverage. Witnesses, including the American Society of Safety Engineers, urged the Committee to rectify such omission.

The Senate Committee on Government Operations approved S. 931, to provide for the reorganization of the safety functions of the Federal Government and for the creation of a Federal Safety Division within the U.S. Department of Labor. (See "Wire," April 1957.)

Hearings were held on S. 384, directing the procurement of liability insurance covering civilian federal employees for damages arising out of injury or death caused by the operation of motor vehicles in the performance of official government duties.

The Department of Defense Advisory Committee on Professional and Technical Compensation, commonly called the Cordiner Committee, disclosed that the Navy and Air Force calculated that accidents cost them \$2 million a day in the fiscal year 1956, in material alone.

Kitchen to Consumer

—From page 98

ing equipment, and a small sub-commissary for supplies of tobacco and candy.

The balance of the old cafeteria area was given over to a small cafeteria-type serving area equipped with tables and chairs and supplying the same food as the mobile units. This room is reserved for women and for male

employees in such areas as spray painting departments where food should not be taken for hygienic reasons.

Over-all responsibility for the food service program was assigned to the personnel department.

Preparation and service of food from purchase to sales is handled by an outside catering firm under contract with Avro Aircraft. The contractor is paid a fixed fee based on gross sales. Avro Aircraft gets any surplus and takes care of any deficits. Food is furnished at very low prices.

The plant engineering and maintenance department is charged with maintaining the central and mobile equipment. The catering contractor is responsible for maintaining high standards of hygiene.

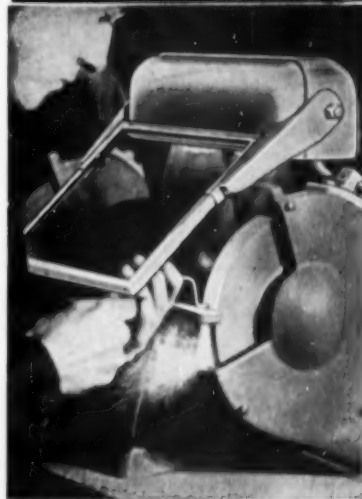
The transport department takes care of transporting the mobile food units which are pulled by battery-operated trucks. At each location the food unit service is supervised by foremen and supervisors of the various departments.

There are two attendants at most serving locations. There is self service for all items except tobacco and cigarettes, which holds their work to a minimum.

Within the contract arrangement, all operations are supervised by the supervisor of food services and all food service accounts are audited by Avro Aircraft's auditors. The catering company also is required to make its own records available to company auditors.

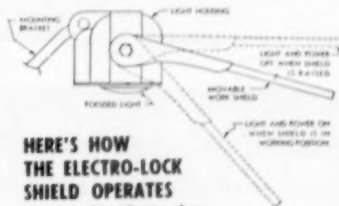
One of the largest industrial installations for brewing coffee and tea is in operation at Avro Aircraft. Eight and 10-gallon vacuum

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containers are used to provide self service for beverages. Roller conveyors carry the containers to the 150 and 100-gallon brewing urns for automatic and individual quantity filling by liquid delivery gauges.

Filled to the individual demand from each food location, the containers pass on along the roller conveyors for hand trucking to a mounting on each mobile unit. These in turn are towed to the 27

designated service areas.

Vacuum containers play an important part in getting all other hot items to the feeding areas. Over a four-week period, Avro Aircraft offers 40 hot dishes in aluminum casseroles, most of which are priced at only 25 to 50 cents. Other staples on the menu are meat pies, 15 cents; sausage rolls, 10 cents; soup, 8 cents. Eleven varieties of soup are served on an alternating basis.

Other items on the daily menu are: sandwiches—three types daily; salad plates, and a wide assortment of pies, cakes, tarts, doughnuts, ice cream and ice cream bars.

Because of a heavy demand for milk, chocolate drink and ice cream, special refrigeration storage is provided.

In planning the new type of food service, helpful advice was obtained from Vacuum Can Company of Chicago, manufacturers of the AerVoid vacuum containers.

Results. After two years of operation of the new food service system, Avro Aircraft reports a saving of approximately a \$100,000 a year over the previous outmoded cafeteria. With so many meals served, a saving of a few cents a meal mounts up to a substantial sum in the course of a year. And this has been accomplished while maintaining previous standards of quality and sanitation. Additional benefits have been reduction of production time losses, less waste and greater over-all efficiency.

Off the Job

—From page 94

trary, he added, continues to mount:

"A high school student in Harts-on-Hudson, N. Y., saved his sight when a lead-pot explosion coated his safety glasses with molten metal," he said. In Milton, Pa., he added, "another student was saved from serious eye injury when his eye protector deflected a flying metal fragment."

Mr. O'Neil lauded the New York City vocational school system for its recent inauguration of eye protection programs for its thousands of machine shop vocational students. This program, he said, "got underway with an \$8,000 expenditure for safety glasses, but only after a vocational student was awarded \$43,000 for loss of an eye in a school shop accident."

Where eye protection programs have been lacking, Mr. O'Neil declared, results have often been

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similarly tragic. In Atlantic City, N. J., he said, a high school freshman suffered loss of one eye and serious injury to the other following an explosion in a chemistry lab. In Texas, a college coed was killed when a glass fragment—which would have been stopped by a \$2.00 pair of safety glasses—pierced her brain through the eye.

In addition, he declared, "students who ordinarily wear eye glasses have an even greater need for safety eyewear. In most instances it is safer for a student to have no eye protection at all than to wear ordinary glass lenses in a school shop or lab."

The uses of safety glasses, Mr. O'Neil said, extend far beyond the classroom and chemistry laboratory. "They should be standard equipment for every normally active youngster who wears eyeglasses. Safety lenses will enable these children to participate in many activities—including sports—from which fear of shattered glasses might ordinarily bar them."

Mr. O'Neil added: "Industry has a sizeable stake in having students receive proper safety training, and should be called on for assistance in establishing school eye safety programs."

National Safety Congress

—From page 96

tion and explanation with color slides of new safety problems and new safety equipment which must be provided in operating higher voltages.

Also on Thursday at a gas industry session on "Natural Gas Facts" three officials of the Southern Counties Gas Company of California will outline a program of public safety presented by their company through fire departments and schools. Included will be a demonstration on the characteristics of gas and how to use it safely.

Textile Section. The success of a skit, "Trial for Survival," at North Carolina's recent 27th Annual Statewide Safety Conference has prompted Congress planners

to invite the performers to Chicago. A jury "trial" will take place at the LaSalle Hotel, with the audience acting as the jury and passing judgment.

Metals Section. The Steel Industry Committee of the Metals Section will present a demonstration Thursday of gas detection and protection equipment and rescue operations.

Electrical Equipment Section. W. F. Lippincott, Engineering Department, E. I. du Pont de Nemours Co., Carney's Point, N. J., will speak Wednesday. His topic: "Is Hot Electrical Work Necessary?"

Petroleum Section. "Tank Safety by the Absorption Method" will be the subject of a talk Monday afternoon by W. W. (Bill)

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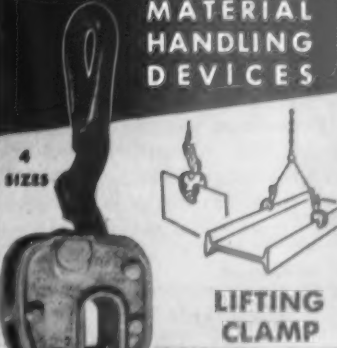
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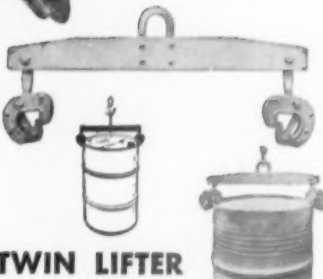
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Colket, coordination engineer, Sun Oil Company, Philadelphia.

The Exposition. Thousands of safety products for every application will be on display in 248 booths, representing 186 exhibitors. Last year's innovation, "Traffic Row," which grouped booths showing products of traffic safety manufacturers, will again be a feature.

Six educational exhibits will be a part of the 1957 Exposition: Boy Scouts of America, National Bureau of Standards, American Optometric Association, National Society for the Prevention of Blindness, Inter-American Safety Council, and the American Red Cross.

Hotel Reservations. If you have not already done so, send your hotel reservations as soon as possible. Registration forms are available from the Housing Bureau, National Safety Council, 425 N. Michigan Ave., Chicago 11.

A chip on the shoulder is about the heaviest load a man can carry.

Safety Queen

—From page 102

vention they have found in many years and say that many new ideas on safety were brought out in the talks contestants gave throughout the state.

Since the completion of the contest the queen, the two runner-ups—Mrs. Janet Greene, American Thread Company, Sevier, and Miss Joan Robinson, McLean Trucking Company, Winston-Salem—and the other regional winners have been appearing before civic organizations, industrial safety committees, and school audiences, giving the safety speeches which won their titles.

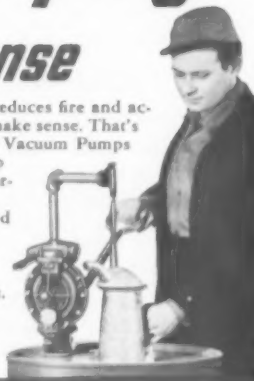
As a result of the contest's success, J. S. Bean, chairman of the Industrial Commission, says his organization plans to make it an annual event. Safety men in North Carolina feel that the idea may develop into a national event and have received word that two other states already are making plans for such a contest.



Pumping makes sense

Any plant improvement that reduces fire and accident hazards certainly does make sense. That's the case when Tokheim High Vacuum Pumps are put into service. They help prevent spilling, slopping, overfilling and dripping. Operate on both forward and backward strokes—deliver 20 gallons per 100 strokes. Available with hose or spout outlets and other optional attachments.

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Circle Item No. 92—Reader Service Card

Auto Manufacturers Take Emphasis Off Speed

THE BOARD of directors of the Automobile Manufacturers Association, on June 6, unanimously recommended to member companies that they take no part in automobile racing or other competitive events involving tests of speed and that they refrain from suggesting speed in passenger car advertising or publicity.

The board voiced the desire of automobile manufacturers to "encourage owners and drivers to evaluate passenger cars in terms of useful power and ability to afford safe, reliable and comfortable transportation, rather than in terms of capacity for speed."

All volume producers of passenger automobiles in the U. S. are represented in the Automobile Manufacturers Association.

The resolution stated that the Association and the members of the board "share the public interest in increasing the safety of highway travel."

"The manufacturers of automo-

biles," the resolution read, "have directed their efforts for many years toward developing and maintaining the performance characteristics of vehicles at levels consistent with highway conditions and the requirements of the using public."

Manufacturers can best serve the public by continuing these efforts, the document stated, "utilizing research and testing facilities, laboratories and engineering proving grounds to conduct tests under controlled and scientific conditions and standards."

The resolution recommended that member passenger car manufacturers:

1. Not participate in any public, competitive test of passenger cars involving or suggesting racing or speed, including acceleration tests.
2. Not encourage or assist employees, dealers or others, or furnish financial, engineering, manufacturing, advertising or public relations assistance in connection with any such event, directly or indirectly.
3. Not supply "pace cars" or "official cars" in connection with any such event.
4. Not advertise or publicize any such

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the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

Important Safety Features

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- ★ Slip proof
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- ★ Easy to stand on
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Big Economy Features

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Machine Guards

Balconies

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Circle Item No. 93—Reader Service Card

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National Safety News, July, 1957

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Model LB Hi-Reach Telescopes

Four heights 20 ft. to 35 ft.
Standard Models from \$1510.00 up.

Model PUL

Three Standard Models

No. 1 — Lift 10' 9"	\$370.00
No. 2 — Lift 11' 9"	\$390.00
No. 3 — Lift 15' 0"	\$400.00

Rubber tired wheels \$10.00 extra
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Custom built Hi-Reach Telescopes up to 100 ft. Write for complete catalogue, Economy Engineering Co., 4518 W. Lake St., Chicago 24, Ill., 342 Madison Ave., New York 17, N.Y.

ECONOMY ENGINEERING

Circle Item No. 94—Reader Service Card

event or the results thereof, or assist and encourage others to do so.

5. Not advertise or publicize actual or comparative capabilities of passenger cars for speed, or specific engine size, torque, horsepower or ability to accelerate or perform, in any context that suggests speed.

Members of the AMA board of directors are: J. N. Bauman, president, The White Motor Co.; Robert F. Black, chairman of the board, The White Motor Co.; Ernest R. Breech, chairman of the board, Ford Motor Co.; E. J. Bush,

vice-chairman and treasurer, Diamond T Motor Car Co.; Harold E. Churchill, president, Studebaker-Packard Corp.; L. L. Colbert, president, Chrysler Corp.; Harlow H. Curtice, president, General Motors Corp.; Henry Ford II, president, Ford Motor Co.; William F. Hufstader, vice-president in charge of distribution staff, General Motors Corp.; C. L. Jacobson, vice-president-dealer relations, Chrysler Corp.; Edgar F. Kaiser, president, Kaiser Indus-

tries Corp.; P. O. Peterson, president, Mack Trucks, Inc.; George W. Romney, president and chairman of the board, American Motors Corp.; W. C. Schumacher, vice-president-motor truck division, International Harvester Co.; J. J. Timpy, vice-president, American Motors Corp.

Industrial Health

—From page 100

per cent were classed as normal by the Oto-Chek method and 93.9 by the standard method. A further check of 500 of the children with the two frequency method showed no greater accuracy than the single frequency method.

This method of screening will simply indicate that certain people have failed to hear the particular frequency at the particular level. To determine the extent and type of hearing loss, such individuals would have to be tested by the standard audiometric methods, but this method should have value because it is a device which is very simple to operate, which operates at high enough frequencies that it is not greatly disturbed by usual ambient noise levels so that specially sound treated testing rooms are not necessary and because only a few seconds are required to complete the test.

Seek Sources of Athlete's Foot

"The Isolation of Dermatophytes from the Floors of Communal Bathing Places." By J. C. Gentles. *The Journal of Clinical Pathology*, 9:374-377 (November, 1956).

IT HAS NOT been demonstrated in the past that the floors of shower and dressing rooms can be a source of infection in athlete's foot. This has been partly due to the lack of a selective culture medium to isolate the dermatophytes in the culture from the moulds, and bacteria which tend to overgrow them in standard culture media. It has also been in part due to difficulty in obtaining satisfactory samples for culture from the floors of such places.

Gentles has used a sampling

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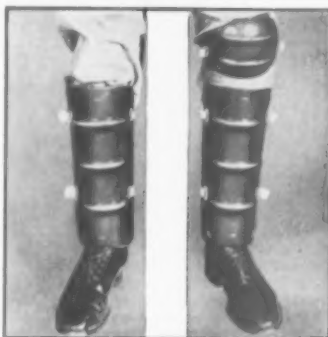
FOOT-TOE-LEG Protection by "Sankey"



"SANKEY" IMPROVED FOOT GUARD

The metal shield (above) is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows.

- Absolute freedom of leg motion, utmost protection and comfort come with the leg-contour shaped "Sankey" fibre shin guard (right).
- Fibre knee-shin guard (right) provides flexible knee movement on jobs with both knee and shin hazards.



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225 SIXTH ST.,—NSC ELLWOOD CITY, PA.

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SIGNS OF ALL KINDS FOR
SAFETY AND EFFICIENCY



PRAIRIE STATE PRODUCTS CO.

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appliance consisting of a hardwood disc 3-inches in diameter, covered with padded velvet and mounted on the end of a short stick. This device can be sterilized and produced satisfactory direct samples of the floor surface which were plated on George's glucose agar medium, containing penicillin, streptomycin and cycloheximide which yielded 11 cultures of dermatophytes from 87 samples.

The samples were collected from shower rooms' floors at three coal mines, shortly after the shower rooms were used by the miners. In each mine the probable incidence of athlete's foot among the men using the showers has been previously estimated.

In one pit with the rate of 17 per cent, three cultures of *trichophyton mentagrophytes* were obtained in two shower stalls from 11 samples.

At another mine was a rate of 16 per cent of athlete's foot, one culture of the same organism was obtained from 24 samples. Antiseptic foot baths were used at the entrance to the shower rooms.

In the third mine, the athlete's foot rate was 50 per cent. Two cultures of *trichophyton rubrum* were obtained from 18 samples. This specie is considerably more difficult to culture than is *trichophyton mentagrophytes*.

In addition to cultures at mines, three cultures of *trichophyton mentagrophytes* were obtained from 10 samples of a shower room in a gymnasium and two samples from 24 samplings at a public swimming pool.

It is concluded that the dermatophytes are commonly present in some quantities on the floors of communal bathing places and presumably exist in their parasitic form in skin debris.

Scouts Prepare for Community Safety Drive

THE BOY SCOUTS of America will turn their full attention to the problem of accidents during 1958 on the urging of President Dwight D. Eisenhower.

In a letter to the Scouts, President Eisenhower said:

"In our land each individual is

of inestimable worth, yet in no other land do accidents cause a more terrible loss of human life and limb. This fact cannot be passively accepted. We must seek new ways to save the basic resources of our nation: its people.

"Encouraged by the splendid results of your Conservation Good Turn four years ago, I now urge you to adopt safety as your service project for 1958. Through the concerted action of your members, and in cooperation with other

organizations, you can alert the public to the urgent need for reducing the tragic toll of accidents.

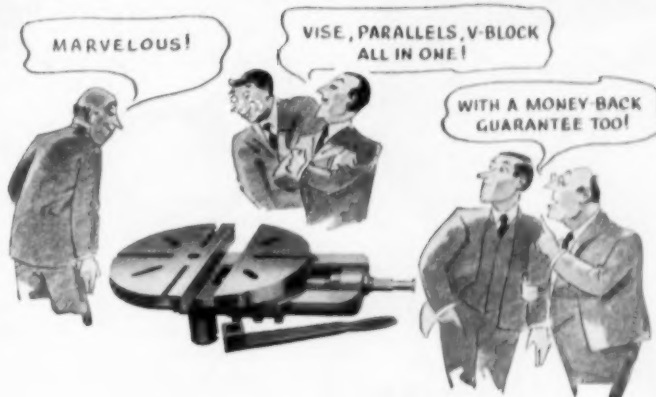
"This is an opportunity for service to your country in the highest tradition of the Boy Scouts of America."

As a consequence of this letter, the Boy Scouts have selected "National Safety Good Turn—1958" as their national service project next year.

Working in close cooperation

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FREE TRIAL OFFER

write for full details!

The handiest, fastest, safest way to make drilling set-ups! Just drop in and drill—all shapes—all sizes. We guarantee it will save its cost in labor alone in six months—to say nothing of the savings from uninterrupted production. We'll put one in your shop for 30 days. Not one penny cost to you if you aren't enthusiastic. Literature on request.

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SAVING FINGERS and EQUIPMENT IS OUR BUSINESS!

FOR 10 YEARS WE HAVE SUPPLIED INDUSTRY WITH THE MOST COMPLETE LINE OF ALUMINUM SAFETY PLIERS AND TONGS AVAILABLE.

We design and make SPECIALS for your needs.

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NO MAINTENANCE COST
NO REFILLS TO BUY**

When Tissues and Solution
are exhausted, dispose
of entire Station and put
up another low priced
station in seconds.

**SAVES YOUR PLANT
TIME, WORK, MONEY**

\$1.50 each station
\$1.35 ea., 1-3 cartons
(12 stations to the carton)
\$1.25 ea., 4 or more cartons
(12 stations to the carton)

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with the National Safety Council, the Scouts have laid much of the ground work for the program. A wide variety of programming materials is being prepared for distribution to Scout leaders throughout the United States and possessions. These materials are designed not only to teach Scouts the techniques of safety, but also to assist them in making their home communities safety conscious.

Calendar Contest Winners For May



*All year Sue had saved up her dough
For a nice trip to Old Mexico.
But a trip on the stair
Left her pocketbook bare*

How would you have completed that limerick? Mrs. William A. Rodgers, whose husband is a tool room operator for Dewey & Almy Chemical Co., Cambridge, Mass., won the first prize in the National Safety Council's "Save-a-Life Line" Contest with this line:

It cost more to get hurt than to go!

The "Save-a-Life Line" Contest appears monthly on the back pages of the Council's Calendar. The theme of the May contest was "Can You Afford an Accident?" Second prize of \$50 went to Howard Williams, a salesman with the Dockson Corp., Detroit, Mich. His line was:

She forgot she must save Sue to go.

Third prize went to Peter E. Valtysson, a janitor at the University of North Dakota. Mr. Valtysson's line was:

Case of paying-as-she-DIDN'T-go.

The 30 winners of \$5 prizes were: Billy K. Marriott, Cincinnati & Suburban Bell Tel. Co., Cincinnati, Ohio.

Isaac V. Davis, Hercules Powder Co., Hopewell, Va.

Edwin S. Rice, (Individual Member), Kansas City, Mo.



*Mounts
Anywhere!*

**McDonald
KANISTER
KIT**



*Convenient
Complete!*

This plastic roll-up kit contains essential first aid treatment in standard or special assortments. Can be draped over forearm, facilitating self-treatment. Contained in weatherproof, dustproof Kanister which can be mounted anywhere.

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Manufacturers & Distributors of
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National Safety News, July, 1957

Circle Item No. 101—Reader Service Card

COTTERMAN

WELDED STEEL SAFETY LADDERS

For Filing Rooms — Stock Rooms — Vaults



SAFE
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STRONG
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EASY TO MOVE
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EASY TO CLIMB
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NON-SKID STEPS

Frame work made from heavy gauge 1" diameter round steel furniture tubing, with all joints electrically welded. Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 13 heights—from 12" 1 Step to 117" 13 Step, and in 4 widths—18", 20", 26" and 32", with and without hand and platform rails.

We also manufacture the
COTTERMAN TRUCK - N - LADDER
A Truck and Ladder combined in a single unit.

Write for Folder No. 56-N for complete information and prices on both these items.

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Accepted Procedure...



against
Athlete's foot

with modern
DOLGE Fungicides

DUSTING Alta-Co Foot Powder on the feet and inside shoes

FOOT BATH Alta-Co Powder dissolved in water for group prophylaxis

FLOOR WASH H.D. Fungicide diluted in 300 parts water—mop on floor

Write for Booklet on Athlete's Foot Control



Circle Item No. 117—Reader Service Card

National Safety News, July, 1957

Mrs. H. E. Manion, Detroit Diesel Eng. Div., Detroit, Mich.

Benjamin L. Johnson, Jr., Standard Oil Co. (Ind.), Whiting, Ind.

Mrs. Ray Diekman, National Stock Yards, East St. Louis, Ill.

Bonnie F. Crenshaw, Marine Corps Base, Camp Lejeune, N. C.

Mrs. Thomas H. Chamings, (Individual Member), Vernon, B. C., Canada.

R. L. Denson, E. I. duPont de Nemours Co., Kinston, N. C.

R. K. Brown, International Nickel Co., Huntington, W. Va.

Mrs. Frank Didier, Farnsworth Electronics Co., Fort Wayne, Ind.

Miss Ruth Van Dusen, University of California Hospital, San Francisco, Calif.

Mrs. James R. Thompson, Employers Reinsurance Corp., Kansas City, Mo.

Maurice Tague, (Individual Member), Shelbyville, Ind.

Mrs. Sherwin Smith, Jr., The Glidden Co., Cleveland, Ohio.

Minnie Maze, Continental Casualty Co., Monongah, W. Va.

N. M. Peacock, Canadian Industries Ltd., Edmonton, Alb., Canada.

Mrs. Chas. C. Haddock, (Individual Member) East Orange, N. J.

Mrs. Dean Garvin, (Individual Member), Wallingford, Conn.

F. W. Gibson, Alpha Portland Cement Co., Manheim, W. Va.

Samuel Martinez, Dowell Inc., Tulsa, Okla.

Mrs. L. K. Steil, Land O'Lake Creameries, Inc., Albert Lea, Minn.

Lem Levinson, Bethlehem Steel Co. Shipyard, Terminal Island, Calif.

Mrs. Fred MacKenzie, General Electric River Works, Lynn, Mass.

Wallace Gue Porter, E. I. Du Pont de Nemours & Co., Arlington, N. J.

Mrs. H. R. Bierhorst, (Individual Member), Jacksonville, Fla.

Wm. J. Weimerskirch, Crucible Steel Co. of America, Pittsburgh, Pa.

Ruth P. Cooper, Warner Company Philadelphia.

J. B. Wrinkle, Jr., American Zinc Co. of Tennessee, Mascot, Tenn.

Ivy V. Forsell, Commonwealth Edison Co., Chicago.

Lifting Devices

—From page 22

equipment. Items such as limit switches, overload switches, etc., have not been shown. What we have attempted to do is to show typical operations of the most commonly used lifting devices and how they are used and guarded.

To deviate slightly from the

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AIRCOOL

**SWEAT
BANDS**

**ARE COOLER,
LONGER LASTING**

Pulmosan Aircool—only sweat band of perforated foam rubber, reinforced with a cotton backing. Perforations aid water evaporation and air circulation... Aircool sweat bands are really cool! Adjustable elastic headband. Foam rubber body is durable, tear-resistant, soft, resilient.
25 per carton — 16¢ ea.;
1000 or more, 14¢ ea.

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It's new!

A COMPACT PACKAGE UNIT for connecting to remote installation



Can be placed in wall recesses, under counters, on shelves or in cupboards and connected to any type Halsey Taylor fountain.

Removable access and ventilation panel available for wall recess installation.



This new quality-built space-saving package unit, in every way, reflects the usual high standards of workmanship and dependability for which Halsey Taylor drinking-water fixtures have become famous. Ask for further information.

Halsey Taylor

The Halsey W. Taylor Co., Warren, Ohio

COOLER FOUNTAINS

73



STOP COSTLY FALLS...THIS QUICK!

Safety condition your plant with "SAFETY-WALK"

Here's the new mineral-coated fabric that provides perfect traction—*sure footing*—even under water or grease! And it's easy to apply, easy to keep clean. Use "SAFETY-WALK" Non-

slip Surfacing also on stairways, ramps, walkways—wherever the danger of a fall is present. It pays off in accident prevention, better employee relations . . . stops costly production delay.

FREE SAMPLE! Please send me "SAFETY-WALK" sample and complete information

Minnesota Mining & Mfg. Co.
Dept. LB-77, St. Paul 6, Minn.

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Company

Address

City Zone State

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SAFETY-WALK
BRAND

NON-SLIP SURFACING

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St. Paul 6, Minn.

Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.



Circle Item No. 103—Reader Service Card

subject, investigate the amount of cable and chain hanging in the truss work. For example, I have found a tremendous amount of electric cable, steel cable, chain and various other items hanging useless—no where near points of operation. These cables, chains and equipment have been set up temporarily and have not been taken down. From the dust it looks as though years have slipped by since use of the set up.

It is true that the overhead, in some respects, is an excellent storage area for cable and chain if the stored item is to be used whenever the occasion arises. We have found that instead of using the equipment in the plant, new chain and cable are purchased. Overhead, with respect to proper use of equipment, is an asset, but when allowed to remain unused it becomes a deficit and potential hazard.

In my inspection of various plants, I find that where there is a guarding program of overhead equipment that there is also a program of preventive maintenance. I have also found where safeguarding methods and programs are used in the prevention of overhead from coming down, we will have an effective use of safe measures in the planning, purchasing and installation stages of new overhead lifting equipment.

Re-Elect Neale NFPA President

JOHN A. NEALE was re-elected president of the National Fire Protection Association at the close of the first general session of the fire safety group's 61st annual meeting in Los Angeles, May 21.

Mr. Neale, chief engineer of the National Board of Fire Underwriters, New York, first took office as president of the NFPA last year. He has been active in the Association for over 33 years and has served as an officer and director for the past 11 years.

Also re-elected to NFPA offices for the coming year were: 1st vice president, Chief Henry G. Thomas, Hartford (Conn.) Fire Department; and 2nd vice president, Loren S. Bush, chief engineer,

Board of Fire Underwriters of the Pacific, San Francisco.

Richard E. Vernor, manager, Fire Prevention Department, Western Actuarial Bureau, Chicago, was re-elected chairman of the board of directors, and Hovey T. Freeman, president, Manufacturers Mutual Fire Insurance Company, Providence, was re-elected NFPA secretary-treasurer.

Licensees Must Report Radiation Accidents

THE ATOMIC ENERGY Commission has amended its regulation on standards for protection of workers and the public against radiation to provide that licensees shall promptly notify the Commission of potentially serious accidents involving licensed material.

The reporting requirement applies to all Commission licensees. It becomes part of an existing regulation providing standards for the safe handling of radioactive materials and establishing limits governing exposure to radiation of atomic energy workers and the public.

As amended, the regulation calls for prompt notification to the nearest Commission Operations Office of any incident involving licensed material which may have resulted in appreciable release of radioactive material or excessive exposure of individuals to radiation. This will enable the Commission to assure that appropriate steps are taken immediately to minimize the consequences of the incident, to determine its cause, and to initiate corrective action.

WHERE TO GET IT

Have you ever wanted to know where to buy some product you see mentioned in an article in **NATIONAL SAFETY NEWS**?

It is not possible to list in the magazine itself the sources of all items mentioned or illustrated.

However, the editors are always glad to help — without charge. When you write, please describe the item carefully, and give the issue and page number in which you saw it. Please address:

The Editors, **NATIONAL SAFETY NEWS**, 425 North Michigan Avenue, Chicago 11.

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The Quick Release Life Preserver Vest



IT'S SAFER BECAUSE IT FLOATS THE WEARER IN A VERTICAL POSITION

... and that means his head is above water level, regardless of his weight.

Further, the Quick Release Life Preserver Vest cannot float off the wearer; yet if the wearer is trapped under a barge or between two objects, and must shed the vest quickly, a slight pull on a control rod releases all fasteners instantly so the wearer is free of it.

The Quick Release Life Preserver Vest has many other features far beyond the ordinary life preserver vest. Write for bulletin giving complete construction and performance details.

SAFETY FIRST SUPPLY CO.

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AMPCO SAFETY TOOLS



Ampeco Safety Tools effectively reduce the danger of sparking in the presence of flammable liquids, gases and dusts. In addition they are noncorrosive. Ampeco Safety Tools provide the best and cheapest risk insurance obtainable, and their use in hazardous locations is approved by Factory Mutual Laboratories.

Information showing the right safety tools for your applications is available upon request.

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SOLID COMFORT

AND SUPERIOR PROTECTION

AT A NEW
LOW
PRICE!



THE
GENTEX

No. 105

SAFETY HAT

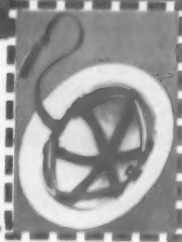
Delivers

Full-Shift COMFORT . . .

Men like to wear it because it's lightweight, with wrinkle-free adjustable head band and exclusive new better-than-ever snap-in sling.

Full-Shift PROTECTION . . .

Strong plastic construction that tops all Government safety standards, insulates against heat and sun and withstands over 10,000 volts.



You Can Bet
your Life
On a



Foremost Manufacturer of
Helmets for the Military

Write today for a test hat and information
on our new low prices.

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450 SEVENTH AVE., NEW YORK 1, N. Y.

Try "PRO-PAR"

—From page 19

"won't work" or identify every nut and bolt in the idea so we can prove the speaker is wrong. PRO-PAR teaches the listener to look for the real feelings of the speaker so the listener can identify the fundamental rightness of the over-all idea.

We do not interpret clearly when we follow up our comments with: "In other words . . . You don't get my point . . . Let me make my position clear . . . etc." PRO-PAR teaches the speaker to organize his ideas for clarity so the listener will hear what the speaker really means.

In substance, then, what is PRO-PAR?

It means:

1. Conditions are created to stimulate free thinking in the expression of ideas for improvement.
2. The speaker organizes his own idea for clarity to the listener.
3. Participants in a discussion question each other to learn what mental adjustments are needed to implement an improved idea.
4. Each participant listens for the fundamental rightness of the other fellow's idea and helps determine which part can be applied (not what cannot be done).
5. All constructive ideas discussed are rearranged and combined into a workable and acceptable plan of action.

Assuming we get our people in actual job situations to understand how they can PROFITABLY PARTICIPATE in a conference type discussion, how can we use PRO-PAR to reduce accidents?

Some companies with low accident frequencies have reached their enviable record by:

1. Creating conditions to make it easy to have daily job huddle discussions to decide on best way to avoid hazards of the day.
2. Stimulating weekly joint discussions of management and labor representatives to identify ways to help violators conform to safe practices (not be penalized).
3. Stimulating monthly depart-

mental safety discussions on ways to improve methods and procedures.

4. Stimulating annual plant-wide discussions to clarify each person's part in accident prevention activities.

How else can you adapt the idea of PROFITABLE PARTICIPATION for everyone within your organization?

Someone said in a speech recently: "It is not the facts which guide the conduct of men, but their opinions of the facts."

If you want me to change my behavior, then you must help me to get the right opinion of the facts as they affect me.

Opinions I have formulated (if properly guided) will help me decide in my own mind to follow practices that will avoid accidents. The same principle applies to your worker who is exposed to uncontrollable hazards on the job.

People are not interested in our ideas; they are interested in ideas that become their own.

PRO-PAR helps people build their own ideas on how to avoid

Miller BAGS

GLOVE • NUT • TOOL



NO. 21W
BOLT & NUT BAG
Reinforced edges
and corner supports.



NO. 10 GLOVE BAG
Water repellent duck
with snap button cover.



NO. 705
TOOL BAG
Separating zipper
and inner pocket
for small tools.

MILLER, the manufacturer of the world's largest line of safety belts, is first in safety equipment development. Better designed canvas bags for every purpose is just one of the results of the MILLER policy "to help Safety Progress." Write Dept. 157 for new catalog showing complete MILLER line and prices.

Miller EQUIPMENT CO., INC.
FRANKLIN, PENNA.

IN CANADA
SAFETY SUPPLY CO., TORONTO
Circle Item No. 107—Reader Service Card

National Safety News, July, 1957

SAFETY ENGINEER

Foreign Employment

Career opportunity for graduate engineer with minimum 5 years practical safety engineering experience in oil operations, heavy industrial or chemical industries. Must know A.P.I. codes and be familiar with hazards peculiar to oil industry, capable of promoting programs and conducting meetings for personnel in all levels.

High salary plus living allowance and liberal all-inclusive benefits conducive to large savings. Excellent community facilities.

Write outlining background and experience. Please include telephone number.

Recruiting Supervisor,
Box 211

ARABIAN AMERICAN OIL COMPANY

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SPECIFY Johnson Ladder Shoes for Safe Climbing



**ALL RUBBER
ANKLE ACTION**
Always Flat at Any Angle

Standard Equipment in
Thousands of Plants everywhere

**JOHNSON
LADDER SHOE CO.**

EAU CLAIRE, WIS.

Circle Item No. 108—Reader Service Card
National Safety News, July, 1957

injury. In a nutshell, then, it helps the person exposed to accidents:

1. Identify the real hazard problem.
2. Build a desire to solve the problem.
3. Determine the best ways to eliminate or reduce the accident problem.
4. Clarify a way to personally apply group answers for the problem.

Let's stop telling people to work safely and help them instead to PROFitably PARTicipate in discussions. Then they can decide in their own minds how to work without accidents.

Don't talk it . . . Do it!

Dearborn to Be President Emeritus On Retirement

The Board of Directors of the National Safety Council, at its meeting in New York City on April 17, took formal action on a request by Ned H. Dearborn, Council president, that plans for his retirement from the office of president be considered.

Discussion and action by the Board was preceded by consideration of the matter by the Finance and Executive Committees of the Board.

The Board resolution provided:

1. That Mr. Dearborn, who will reach retirement age in 1958, will continue as president of the Council until the annual meeting in October 1958, subject to his re-election as president at the annual meeting in October of this year.

2. That the position of President Emeritus of the Council be created and that Mr. Dearborn be given the title for five years beginning January 1, 1959. In this capacity, Mr. Dearborn would serve the Council in various capacities as requested by the Board.

The Board resolution stated that the action was taken "in consideration of (Mr. Dearborn's) outstanding services to the National Safety Council and in further consideration of his agreement to be available for assignment from the Council after his retirement."

If you're troubled by a noise in your car, let her drive.



can help you

REDUCE ACCIDENTS

You know the important part safety messages can play in your accident prevention program—particularly for the simple familiar cautions we are all so likely to overlook.

If only you could get them read!

TWO-WAY PROTECTION

AJAX Cups can help . . . because they put their imprinted safety messages right in your worker's hand, several times a day, at just the moment he is relaxed, receptive, most likely to read.

Plus the fact that these crisp, clean AJAX Cups provide the most convenient, comfortable drinking water service, boost employee morale, and reduce the hazard of transmitted infections.



AJAX® CUPS — wedge-shaped, easy to hold, dispense open, ready to drink from; in 4, 6 and 7 oz. sizes, imprinted with assorted stock safety messages at no extra cost—or your own message to order.

AERO® CUPS — for those who prefer a flat-bottom cup; in 3, 4, 5 and 6 oz. sizes. Also with stock safety messages or your own message to order.

Get the full story—

ask your paper merchant or write us today for new folder giving full details about AJAX and AERO Cups and equipment.



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ENVELOPE COMPANY**

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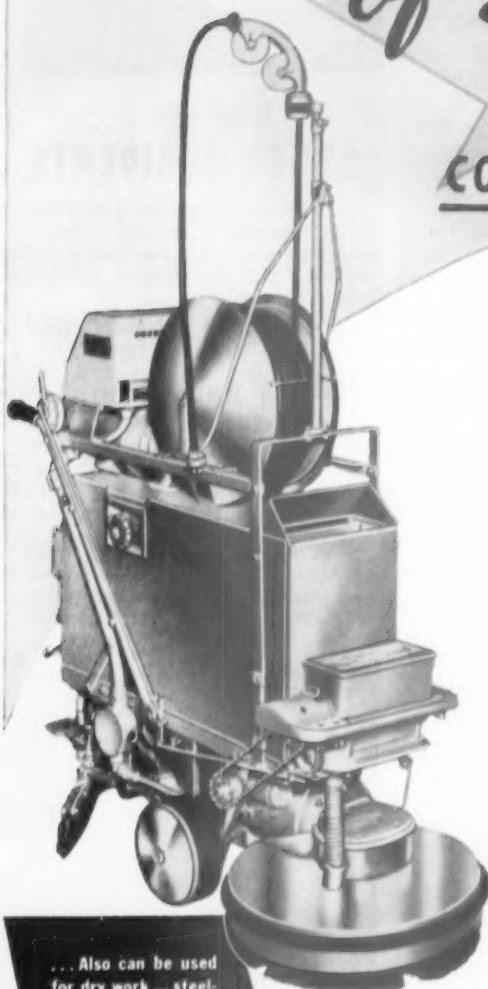
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SMALL-AREA BUILDINGS...

Save $\frac{2}{3}$ of Every Hour
of Scrubbing Time

WITH A

COMBINATION SCRUBBER-VAC!



... Also can be used
for dry work — steel-
wooling, et cetera

(Powder Dispenser
is an accessory)

Today, even buildings with but 2,000 to 15,000 sq. ft. of floor space can reap the labor-saving, cost-reducing benefits of *combination-machine-scrubbing*. Here's a *Combination Scrubber-Vac*, Finnell's 418P at left, that's specially designed for such buildings. This *electric* unit, with its 18-inch brush spread, cleans floors in *approximately one-third the time* required with a conventional 18-inch machine and separate vac.

The 418P applies the cleanser, scrubs, and picks up (damp-dries the floor)—*all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's *self-propelled*, and has a *positive clutch*. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly. Compactly built, the 418P also serves advantageously in larger buildings for the care of floors in narrow aisles and congested areas, and is available on lease or purchase plan.

Finnell makes *Scrubber-Vac Machines* for small, vast, and intermediate operations, and in *gasoline* or *propane* powered as well as *electric* models. From this complete line, you can choose the size and model that's exactly right for *your job* (no need to *over-buy* or *under-buy*). It's also good to know that a *Finnell Floor Specialist and Engineer* is *nearby* to help train your maintenance operators in the proper use of the machine and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2207 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines



BRANCHES
IN ALL
PRINCIPAL
CITIES

New SAFETY EQUIPMENT

Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.

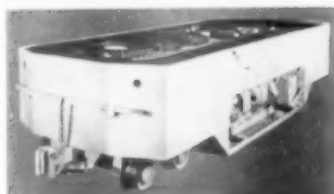


In keeping with the Fire Protection theme of this issue, the majority of the products announced in the New Safety Equipment Section are recent developments in fire protection and control equipment.

Pressurized Dry Chemical Extinguisher

This 3-lb. dry chemical unit has a UL rating of four B:C compared to a one quart carbon tetra-chloride one-half B:C rating. The unit is small—3½ x 15 in.—and is re-usable since it is a puncture disc type. The inexpensive unit also has a gauge.

Safety First Products Corp., 175 Saw Mill Road, Elmsford, N. Y. (Item 301)



**Mine
Fire
Truck**

A rugged, highly-mobile mine fire truck can remain underground at all times to combat stubborn underground fires.

Although it has a capacity of 2,100 gal. of water and a motor and pump assembly to deliver heavy streams if desired, the truck is a compact, low-slung unit which can negotiate a No. 2 turnout with ease.

The standard unit is 18 ft. long, 7 ft. wide and 50 in. high. Model 2100 carries 200 ft. of single conductor cable on a reel at the rear of the tank. The motor pump assembly, including controls and valves, is recessed in the side of the truck for ease of "hook-up" and maintenance.

A 20 h.p. 3,500-rpm electric motor is directly coupled to a two-stage centrifugal pump that delivers 100 gal. of water per minute with a 450-ft. head and is capable of throwing an effective horizontal stream 100 ft.

The special hose nozzle will deliver either a heavy fog or a concentrated straight stream of water.

Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh, Pa. (Item 302)



**Stainless Steel
Ball Valve**

Type 316 stainless steel ball valve has a Teflon seat and trim. It is designed for chemical and

processing plants, food plants and many others.

The valve has a low pressure sealing, is easy to operate, and the stem can be repacked without removing the valve from the line. The handle of the valve can be put in eight different positions. The valve resists corrosion.

It is full round flow and opens and closes with a quarter turn. The valve is available in ¾ in. to 2 in. sizes.

Rockwood Sprinkler Co., 38 Harlow St., Worcester 5, Mass. (Item 303)



**Sprinkler
Head**

This new sprinkler head design offers better spray distribution. Incorporating improved appearance, the new design is available for upright or pendent installation. Model 38-B is of more rugged casting than previous models, and will give a better distribution pattern over a wider area than was previously possible.

"Automatic" Sprinkler Corp. of America, Youngstown 1, Ohio. (Item 304)



Aluminum Safety Hat

The Alumihat, an aluminum safety hat, is said to exceed federal specifications for construction workers' hats, including both impact resistance (drop ball test) and penetration strength (plumb bob test), passing all requirements except for insulation resistance.

The six-point suspension headgear is a soft and pliable unit, shock absorbent and comfortable. It is buttonholed inside the hat shell for easy removal. The headband with clearly marked hat sizes is fast and easy to adjust. Chin straps and winter liners are available.

Jackson Products (Air Reduction Sales Co., Div. Air Reduction Co., Inc.), 31739 Mound Rd., Warren, Mich. (Item 305)



Spray Gun Receiver

Clogging due to paint hardening in spray gun nozzles between operating periods is said to be prevented when the gun is placed in this spray gun receiver. Paint spray guns are ready for instant use.

The receiver keeps the nozzle tip of the spray gun in a solvent solution when not in actual use to prevent the paint from hardening and closing the opening. Only the nozzle tip is in the solution and the packing is kept away from the liquid and vapor so that it is not affected in any way.

A reservoir tank located well out of the way of the operator keeps a constant liquid level in the receiver. The perforated metal fire baffle in the gun port opening prevents ignition of the solvent in the spray gun receiver from exterior sources of ignition.

The Protectoseal Co., 1920 S. Western Ave., Chicago 8, Illinois. (Item 306)

Water Fire Pump

Model FS fire pump is a lightweight, modern design, fire pump designed for professional fire fighters and volunteers. The FS Model has a positive displacement single stroke action and is 18 in. long. A positive shutoff at any point of the pump stroke eliminates loss of water from pump drip-off. The tank is made of tight coat galvanized steel, and has

a 3 in. diameter opening, screw cap, baffle vent and removable basket-type strainer.

Over 100 sizes of spray tips are available which deliver a few drops or a pumpful. The pump conforms to U. S. Forest Service Specification No. 254.

Fire Equipment Development Co., 829 Estabrook St., San Leandro, Calif. (Item 307)



Dry Chemical Fire Extinguisher

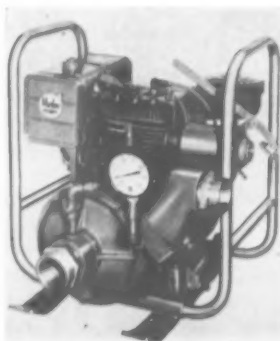
Model PDC-2A is a dry chemical fire extinguisher said to have the fire-killing power of 4 1-qt. vaporizing liquid extinguishers.

The unit is 14½ in. high and weighs only 4 lbs. and according to the manufacturer is harmless, nontoxic, noncorrosive and will not freeze in any climatic temperature.

The extinguisher is simple to service. A pressure gauge on top indicates its readiness for operation since the gauge reading is always the same as the internal pressure.

The model is approved by Underwriters' Laboratories and is for the protection of Class B (flammable liquids) and Class C (electrical) risks.

American LaFrance Corp., FPE Div., Elmira, N. Y. (Item 308)



Portable Fire Pump

A portable fire pump has been engineered and designed to meet the needs of all types of fire fighting organizations. The lightweight pump can be moved to a fire or water source that a pumper cannot reach. It is ideal for stand-by assignments and can be carried in a car trunk. Removable, wrap-around aluminum handles protect the pump from roll-over damage and permit the unit to be easily carried or stored in small compartments.

Powered by a 4 cycle, 9 h. p. gasoline engine, the pump will prime in 15 to 30 seconds, depending on the suction lift and it has over 100 lbs. pressure available for fog or foam operation.

The pump may also be used for booster service and will relay enough water through 300 ft. of 2½-in. hose and up to a 75-ft. hill to supply a pumper operating 2½-in. nozzles at 100 lbs. pressure.

Marlow Pumps, Div. Bell & Gossett Co., Midland Park, N. J. (Item 309)

Dry Powder for Metal Fires

A piped fire extinguisher system utilizing Met-L-X dry powder was developed for liquid metal users as an agent to reduce fire hazards.

The system is designed to give maximum protection against metal fires in areas when use of manual extinguishers is impossible because of radiation hazards or because of the denser, caustic smoke characteristics of liquid metal fires.

Met-L-X is especially effective on fires in such liquid metals as sodium and NaK. It may be activated manually or by heat actuating devices. The system extinguishes liquid metal fires by discharging dry powder through nozzles installed over the hazard areas. Piping is so situated as to coat all vertical surfaces and at the same time distribute an even layer of the powder over flooring to guard against fire from spilled metal. The unit containing the powder is located apart from the liquid-metal hazard area leaving it free both from flames and toxic fumes.

The powder consists primarily of sodium chloride especially compounded with materials that are both water-repellent and sufficiently free-flowing to be applied through piping systems and hose lines under pressure.

Met-L-X is also available in portable hand extinguishers, wheeled units and large-capacity stationary units.

Ansul Chemical Co., Marinette, Wis. (Item 310)



Lightweight Resuscitator

The "Back-Pak" resuscitator is especially for fire departments, industrial plants and many other establishments

needing a portable, low-cost emergency unit.

The resuscitator weighs about 20 lbs. with its two "D" oxygen cylinders and is designed so it can be quickly fastened on the back.

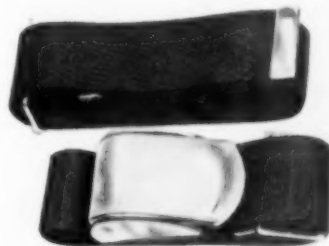
The control which adjusts the flow of oxygen to the lung capacity of any patient automatically inhales and exhales for the patient until his own breathing is restored. A twist of one dial then converts the unit to an inhalator to provide 100 per cent oxygen. It can also be used as an aspirator to suck obstructing material from the throat.

For use in areas of air contamination such as mine or sewer disaster, chemical explosion, smoke or dust the unit can be equipped with dual oxygen masks, one for the victim and the other for the rescuer.

The unit can be supplied with extra tubing (up to 200 ft.) so the lightweight mask can be lowered to a

victim whom emergency crews cannot reach immediately.

National Cylinder Gas Co., Medical Division, 840 N. Michigan, Chicago, Ill.



Auto Seat Belts

Impact No. 7123 Saf-tee Belt has been adopted by many fleet operators throughout the United

States. The durable belt is backed up by a 10-year warranty. It is available in 11 attractive colors and is complete with mounting hardware and attachments.

The manufacturer says the belt complies with SAE specifications and state legislation regulations. It is used by many groups and enforcement agencies including highway patrols, fire departments, and in driver training cars.

Ray Brown Automotive, 5656 Santa Monica Blvd., Los Angeles 38, Calif. (Item 312)



Automatic Fire Detectors

New UL approved automatic fire detectors featuring individual and multiple unit installation have been designed for industrial plants, refineries, warehouses, detached buildings and other locations.

Both single-station units and system installations are equipped with a new powerful diaphragm horn that sounds a five-minute warning audible up to one-half mile or more.

Individual units are completely self-contained. System installation permits an unlimited number of detectors to be arranged in a single, tubing-connected series. Individual and system detectors may be placed in critical areas and the horn mounted in any location convenient to watchmen or other personnel.

Manual equipment for sounding fire drills, testing and other signalling uses, may be easily added without disturbing the automatic operation.

The power charge of freon gas contained in the detector cylinder is released to sound the horn when temperatures reach activation point. Detectors are available with temperature ratings of 136 F. and 174 F.

Falcon Alarm Co., Inc., 243 Broad St., Summit, N. J. (Item 313)



Pressure Demand Air-Pak

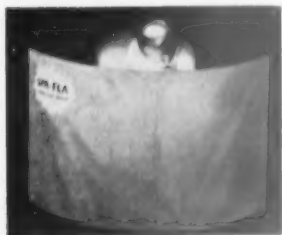
This Air-Pak supplies pure, fresh, filtered air to workmen from high pressure air cylinders. The air from the cylinders is reduced in pressure by a reducing valve. Before reaching the masks the air passes through a regulator. Whether the workman is resting or breathing heavily under extreme exertion, the regulator maintains a gentle positive pressure in the mask.

Available air supply is visible at two check points. It is shown on the pressure gauge at the cylinders and also can be seen by the workman on the gauge attached to his harness.

The use of high pressure air cylinders makes possible the elimination of cumbersome, difficult to clean, large-diameter hose. Small-diameter, armored hose, easily handled, enables personnel to perform their work in safety and comfort 250 ft. or more from the source of air.

The unit will be valuable in industries having hazardous respiratory operations that create serious safety, expense and worker problems to management.

Scott Aviation Corp., Lancaster, N. Y. (Item 314)



Portable Welding Shields

These portable welding shields confine welding operations and protect personnel from sparks, flash, flying chips and scale.

They are self-supporting and flexible for conforming to the requirements of the job and may be used for floor, bench, machine and overhead welding and for flame-cutting, wire brushing, chipping and grinding.

The shields are durably constructed of flame proofed canvas on a wire mesh frame. They are made in a wide range of sizes.

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa. (Item 315)

Fire Hose

Super Fyr-Strype is a fire hose that has the built-in protection of 100 per cent pure Dacron polyester fibre strips over the total outer jacket fold areas. These areas are the highly vulnerable points of

standard cotton jacket hose where 90 per cent of wear occurs. The tough reinforcing strips provide extra abrasion resistance.

Added advantages include extra strengthening at key points permitting high test pressure for an extra safety margin. The non-absorbent Dacron fold strips also insure complete fold and crease drying. The flexibility of the fold strips allows easier racking and speedier unloading.

Coupling ends are reinforced with an extra rubber lining to insure a long lasting coupling bond. The new hose is available in 50-ft. lengths, 1½ and 2½ in. diameters.

The Fyr-Fyter Co., 221 Crane St., Dayton, Ohio (Item 316)



Aluminum Alloy Safety Hat

Ribbed for maximum blow resistance and with an adjustable headgear, this aluminum alloy safety hat is called the "Superlite."

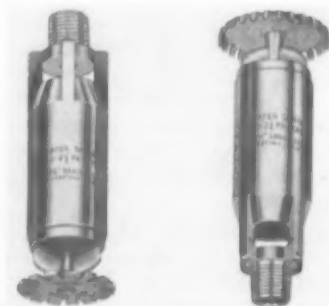
It is streamlined and lightweight, with longitudinal ribbing and rolled edge and is equipped with a polyethelene head suspension. The headband is marked in various sizes and even with liners the adjustable feature is said to be unimpaired.

The suspension is mildew, mold, and fungus-proof, and does not mat up with grease and oil.

Aluminum repels heat in hot weather and half-liners for cool and full liners for cold weather are available.

These hats and their accessories meet standards for safety hats.

The Boyer-Campbell Co. (Safety Div.), 6540 St. Antoine, Detroit 2, Mich. (Item 317)



Combination Sprinkler Heads

New designs for both an upright and pendent sprinkler head for use in combination air foam and water spray fire protection systems have been announced. The pendent sprinkler head permits adaptation of water sprinkler systems through the combination use in special hazard situations without re-piping, even where space is limited between present piping and ceiling.

The sprinkler head first discharges a large volume of thick foam to blanket "spill" or surface fires, then produces a water spray. A pre-determined quantity of foam producing material automatically introduced into the system produces the foam blanket before the regular water spray issues from the same head or nozzle.

The additional safety factor offered by the water spray does not diminish the protection established by the foam blanket which maintains its effective fire-smothering consistency for approximately one-half hour under the water deluge.

Manual controls on the system permit change to the water spray at any time during the foam discharge and also permit the laying of a blanket of foam as a fire preventive at any time, without the shower of water.

"Automatic" Sprinkler Corp. of America, Youngstown 1, Ohio. (Item 318)



**Auxiliary
Fire Fighter**

A new high-pressure-fog fire fighter designed for mobility and instant action is a self-contained unit which carries its own water supply. This makes it very useful for forest, grass, brush, and similar types of fires where minutes count and water is scarce.

It is especially recommended as a unit for airport and factory protection and it also meets the demand of large municipal fire departments for a smaller, highly maneuverable unit.

Each of the two hose reels on Model 250F fire fighter is equipped with 250 ft. of special high-pressure hose.

Fog is obtained by driving water at high pressure through a special fire-fighting gun that converts it into a torrent of fog. The body of the unit features more than 60 cu. ft. of weatherproof storage compartments and a full-width rear platform with approved non-skid-tread plate.

The 250-gal. water tank is made of copper-bearing 10 gauge steel with a corrosion-resistant coating. The two hose reels are spring loaded and have horizontal and vertical guide rollers for fast, easy hose laying or pickup.

John Bean, Div. Food Machinery & Chemical Corp., Lansing 4, Mich. (Item 319)



Snake Bite Kit

The "Compak" kit has necessary equipment for complete first-aid treatment of snake or insect bites and bee stings. The 3-in.-long kit weighs only 1½

oz. and includes 3 suction cups, a knife, a bottle of antiseptic and a tourniquet. The low-cost snake bite kit is adequate and practical. The suction cups are made of light soft rubber and hold themselves tightly to the skin.

E. D. Bullard Co., 2680 Bridgeway, Sausalito, Calif. (Item 320)



**Asbestos
Protective
Clothing**

Safe operation for workmen in areas where temperatures exceed 2,500 F. is possible with this aluminized asbestos cloth. The fire protective cloth reflects over 90 per cent of the radiant heat to which it is exposed.

The illustration shows a workman wearing a suit of the cloth standing directly before the fully opened door of an open hearth furnace operating at 2,900 F. After two minutes in this position the door was closed. The worker experienced no discomfort from his close exposure to the high temperature.

In addition to its effectiveness in reflecting radiant heat the cloth can be exposed to direct flame without damage. The product is a tightly woven asbestos cloth surfaced by a special process with a heat reflective aluminum foil. The smooth aluminum foil surface resists water and oils. Flying sparks and cinders fall off without damaging the material.

Keasbey & Mattison Co., Ambler, Pa. (Item 321)



**Explosion
Proof
Electrical
Switch**

A new explosion-proof electrical switch which can be used as a free-cable "on and off" control switch in hazardous locations has been developed for use with many types of electrically rewound hose reels. These hose reels are used for in-plant liquid or gas delivery or fire protection.

The new switch is waterproof and weathertight and a 5-ft. length of Type SO cable is sealed into the switch with 2 No. 18 conductors and 1 No. 18 ground wire. The switch is compact and light and is supplied with terminals and fittings. Two types of mounting brackets are available.

The switch is UL approved, Class 1, Groups C and D, for D. C. pilot duty, 24 volts maximum.

It can be mounted on or near a hose reel, or the design permits it to be used as a free-cable switch. With installations of this type, it can be moved by the operator to the extent of the cable length.

Clifford B. Hannay & Son, Inc., 70 First St., Westerlo, N. Y. (Item 322)



Deluxe Dunking Station

A deluxe model, available in both standard and jumbo sizes has been added to the present line of dunking stations. It features smooth, brightly polished canisters and the deluxe models will fit well into modern offices, waiting rooms, hospitals, first-aid rooms, etc.

Standard Industrial Products Co., Dept. S, 920 N. Garfield, Peoria, Illinois. (Item 323)

Mobile Aluminum Fire Truck

An aluminum fire truck has been designed for fighting fires involving nonconventional fuels and fuel storage farms and fires resulting from large scale.

The truck is equipped with a turret to combat large fires inaccessible by hose. It carries a 1,000-gal. water tank and 150 gal. of concentrated foam. The truck is 28 feet long and 8 feet wide and is powered by a 330 h.p. rear engine. It is capable of speeds up to 60 miles an hour and of negotiating 60 per cent grades. Hydraulic steering makes possible a turning radius of only 40 ft.

All equipment is enclosed in insulated compartments heated by an automatic gasoline-fired electrically controlled coolant heater. It withstands the harmful effects of salt water, high humidity, fungi, molds and tropical insects.

Walter Motor Co., Long Island City, N. Y. (Item 324)



Fibre Glass Face Shield

The Fibreglass spark guard of this face shield eliminates the moisture and heat absorbing characteristics which quickly distort or destroy

ordinary face shields used in welding, grinding and other hazardous occupations.

Along with its shape retaining qualities, the new face shield is said to afford a larger window area, since the coverage around the face is 19 in. An easy operating ratchet adjustment provides the plastic headgear with a comfortable fit. Windows, available in green or clear shades, are easily replaced and they are supplied with an aluminum binding if desired.

Sellstrom Mfg. Co., 222 Hicks Road, Palatine, Illinois. (Item 325)



Plastic Safety Hat

An all-plastic safety hat is available in two models—No. 105 brimmed hat and No. 205 peaked hat. The

manufacturer states that in addition to exceeding all standard safety requirements for resistance to pressure, impact, combustion and voltage, the newly-developed plastic shell withstands extremes in temperatures and is especially useful in zero and subzero climates. The new hat incorporates a suspension system which provides comfort and protection and that is washable.

General Textile Mills, 450 Seventh Ave., New York, N. Y. (Item 326)



"Up-Flow" Air Vent

No. 45 "Up-Flow" Air Vent is listed with the National Board of Fire Underwriters, and is said to eliminate the dangers of accumulating vapors

in underground storage tanks by permitting the vapor to escape easily in an upward direction.

This upward projection of vapor reduces the fire and explosion hazards that exist with down-vented gasoline vapors.

The three-piece construction includes the hood, screen and body which are assembled with a single center screw. With the exception of the removable brass screen all parts are made of aluminum for long-life, maintenance-free service. Standard 40 mesh brass screen seats in an internal annular groove at the base of the body and prevents entry of dirt and moisture.

The body, only slightly larger than the pipe, can be installed close to a wall, has no threads and is held firmly in place by a tightening screw.

It is available in 2 sizes: 1½ in. size—3¾ maximum diameter by 3¾ over-all height; and 2 in. size—4 in. maximum diameter by 4¼ in. over-all height.

Universal Valve Co., 690 South St., Elizabeth, N. J. (Item 327)



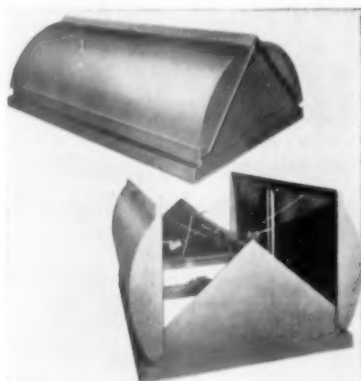
**Portable Dry
Chemical Fire
Extinguishers**

A UL approved line of portable dry chemical fire extinguishers is available in sizes from 1 to 4 lb.

The extinguishers will have many applications in fighting Class B and C fires. They are simple to operate and no special fire fighting techniques are required.

Immediate, positive action is said to be assured even at sub-zero temperatures and there are no maintenance costs or problems involved. They are compact, small and lightweight and the units feature a leak-proof, double-seal valve that operates on the self-closing, pressure-assist principle. A specially designed duck bill nozzle gives wide coverage and easy inspection is provided by a pressure gauge recessed in the bottom.

Leeder Mfg. Co., Inc., 133 Woodside Ave., Briarcliff, N. Y. (Item 328)

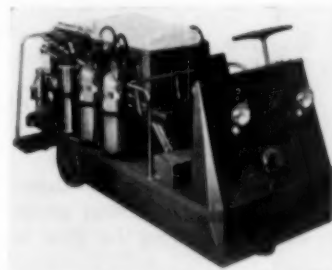


**Fire
Relief
Roof
Vent**

A quick-opening "fire vent" to permit rapid escape of smoke, heat and gases in the event of fire is called the "Pyrojector." It is installed and operated entirely above the roof line. Two double-wall dampers are opened outward by powerful coil springs when a fusible link melts at 212 F. This creates a roof opening of 28 sq. ft. This relief near the fire source is said to limit the horizontal spread of flames and makes fire fighting more effective by revealing the location of the flames.

The Pyrojector is completely weatherproof when closed and can be used for extra ventilation in good weather. It can be installed singly or in groups above the most likely fire sources.

The Swartwout Co., 18511 Euclid Ave., Cleveland 12, Ohio. (Item 329)



**Electric
Industrial
Fire Truck**

A three-wheel, electric-powered industrial fire truck that can carry 4 or 5 men and a large assortment of fire-fighting equipment easily makes sharp 90-degree turns in one swing in factory aisles.

Powered by batteries which feed a specially built 24-volt, direct-drive motor, the fire truck is always prepared for emergency action. It is highly efficient for fighting in-plant or plant site fires.

Automatic lights and siren go on the moment the stand-up driver steps on the safety treadle. The brake sets and power is cut off automatically as soon as the driver steps off his position.

In addition to personnel, the truck carries equipment including 200 or more ft. of hose, 3 nozzles, 6 to 8 large extinguishers, 2 to 6 small extinguishers, asbestos gloves and blankets, axes, flashlights and helmets.

Victor Adding Machine Co., Electric-Car Div., 3900 N. Rockwell, Chicago 8, Ill. (Item 330)



**Full-Vision
Gas Mask**

As an aid to gas mask wearers who require eye glasses for safe, accurate vision, No. 6

face piece has built-in spectacle frames.

The face piece incorporates a support bracket that mounts the spectacle frame for standard lenses ground to the wearer's prescription. This allows a good mask fit around the temples and ears and is said to eliminate leakage encountered when masks are worn over the usual glasses with ear hooks or temple frames.

The "Spec" mask also features large plastic outer lenses shaped to provide adequate space for wearing glasses comfortably and safely. All No. 6 face pieces are now being built with a special boss molded into the face piece onto which the spectacle frames can be readily mounted when desired.

The mask can be furnished complete with spectacles made to the wearer's prescription or can be

supplied with the frames only, in which the user may have personal lenses inserted.

Acme Protection Equipment Co., 1209 Kalamazoo St., South Haven, Mich. (Item 331)



Oxygen Inhalator Kit

A portable oxygen inhalator kit with a control gauge which regulates the flow of

oxygen making it impossible to inhale an overdose is designed for truck drivers, fleet owners and highway safety officials.

According to the manufacturer, the inhalator is not intended as a substitute for sleep but is to replace such artificial stay-awake stimulants as alcohol, caffeine, and other drugs. The kit can also be used by factory workers, policemen, and firemen.

Each kit has 2 removable oxygen cartridges, one ready for use and a spare cylinder. A gauge attached to each unit indicates at all times how much oxygen remains in the cartridge.

The kit is 16 x 4 in. and weighs 6¼ lbs.

Oxy-Gear, Inc., 30 N. La Salle St., Chicago 2, Illinois. (Item 332)

NEWS ITEMS



Fire Equipment Manufacturers'

Walter E. Morgan, Jr., industrial sales manager for Walter Kidde and Co., was elected president of the Fire Equipment Manufacturers' Association.

Other officers elected were first vice-president, A. D. Symonds, treasurer of W. D. Allen Manufacturing Company; second vice-president, Harold A. Strain, sales manager, fire protection equipment, American LaFrance Corporation, and treasurer, Paul Nurkiewicz, vice-president, Stop-Fire, Inc.

The gentlemen pictured from left to right are Messrs. Morgan, Symonds, Strain, and Nurkiewicz.

* * *



W. G. Beggs, Jr.

William George Beggs, Jr., has been appointed western division manager of the Buffalo Fire Appliance Corp.

He first joined Buffalo in 1947 as district manager of the southwest territory.

* * *

Richard Krause, president of the Safety-First Shoe Co., Inc., Holliston, Mass., has announced the appointment of Lou Kreamer of Baltimore as sales manager of the Railroad Sales Division of the company. Mr. Kreamer has served as district manager for this company for several years.



Paul D. Smith

U. S. Fire Protection Engineering Service, Inc., a consulting engineering firm in the fire prevention and fire protection field, has announced the establishment of a San Francisco office. Paul D. Smith is the manager of the new office.

The office is located in the Sheldon Building, 461 Market St., San Francisco.

* * *

Ansul Chemical Co. has opened a sales office at 1 Bala Ave., Bala Cynwyd, Pa. The office was formerly located in Philadelphia.



Frank Tuttle

Ansul has also added Frank Tuttle to its sales force in Kansas City. Mr. Tuttle has had experience in insurance underwriting and fire equipment sales.

* * *

George M. Keen has been appointed manager of the sprinkler department, Power Piping and Sprinkler Division of Blaw-Knox Co., Pittsburgh, Pa. Mr. Keen has been with Blaw-Knox since 1937.

PLAQUES — TROPHIES EMBLEMS — AWARDS



SAFE DRIVER PLAQUE

Two Tone Jewelers Bronze Etching on
Genuine Walnut Shield, 7 3/4" x 7 1/4".

SD-3 SAFE DRIVER\$6.50
SD-3P PLAIN RIBBON\$6.50

1933 SERIES



Available in
over 40 titles.
1 1/2" dia. hard
glazed enamel,
heavily gold
plated pin and
safety lock catch.

\$10.50 per
dozen F.E.T.

Write for free 36-Page Catalog

Williams Jewelry & Mfg. Co.

Dept. NS-7 10 S. Wabash Ave.
Chicago 3, Ill. Central 6-5018



GETS-A-LITE GUARD and GUIDE

Quickly and Easily Installed
by Anyone — No
Tools Needed!

- Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.
- Made of indestructible spring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.
- Once installed, GETS-A-LITE GUARD AND GUIDE is NEVER removed.
- Nothing to unlock, fuss with or lock, when changing lamps.
- GETS-A-LITE GUARD AND GUIDE actually steers lamp into socket, enabling maintenance man to change lamp in 10 seconds!
- Available for 40 watt and 100 watt fluorescent lamps.

GETS-A-LITE CO. — Dept. NS-77
3865 N. Milwaukee Ave., Chicago 41, Ill.

Circle Item No. 112—Reader Service Card

National Safety News, July, 1957

Consultation Corner

—From page 12

wear them only a few minutes before his hands break out in a rash similar to a poison ivy rash. He has done line work for years and did not have this trouble until a few years ago when his hands accidentally were doused with DDT.

Have you ever had a situation similar to this and do you know of any powder or other treatment which might clear it up? He has taken treatment from local doctors.

I have heard of linemen being allergic to the coloring matter in red gloves but this man is allergic to all. I have never known black rubber gloves to cause trouble.

Answer. We have talked to many utility people about this problem and each has had this problem at one time or another. They suggest that your man see a dermatologist. Many times he has a better knowledge of this problem than the local doctor.

Linemen's rubber gloves are made of steam-cured rubber, and sometimes the sulphur and the materials in the glove cause a rash, especially if the hands begin to perspire. For men troubled this way many utility companies supply a thin white cotton or nylon glove similar to a pall-bearer's glove. This prevents contact of the skin with the rubber glove and absorbs moisture and perspiration that might cause a chemical reaction between the rubber and the man's skin.

If this problem continues order linemen's gloves with a white coating of neoprene inside the glove. This very thin coating separates the steam-cured rubber from the man's skin.

In addition, please look in the New Equipment section of NATIONAL SAFETY NEWS, April 1957. An article on page 130 discusses a medicated powder for use inside rubber gloves.

Two burglars were busy in a store.

"Look at the price of those suits!" said one, "Downright robbery, ain't it?"

★ The Positive Ladder Safety Device



Locks AUTOMATICALLY & instantly-holds

Prevents death and injuries from falling.
Automatic: Positive. Will catch workman if he starts to fall even if unconscious.
Inexpensive. Easy to install. No upkeep. Clamps to any rung ladders, peg ladders, pole or frame. No welding or cutting.
Simple to operate: Requires no attention from climber.
Notched rail hot dipped galvanized. Entire equipment rust and corrosion proof.
Can be kept free of ice by applying heat inside carrier rail.
In use approx. 9 years. Approved by Safety Engineers and Govt. Agcys. throughout country. Patented. Manufactured only by
SAFETY TOWER LADDER CO.

1024 Burbank Blvd., P.O. Box 1052
BURBANK, CALIFORNIA

AMAZING RELIEF FOR POISON IVY



The newest trend in the formulation of Poison Ivy Creams incorporates Zirconium Carbonate which has proved most effective for relief of itching and dermatitis caused by Poison Ivy.

ZOCREME contains 20% Zirconium in a water washable base and serves a dual purpose — **ZOCREME** can be used both as a preventative and treatment for Poison Ivy.

Available in unit packages of 1/2 oz. and 1 oz. tubes (pictured above). **ZOCREME** is stocked by major Safety Supply Houses. Write for free literature and the name and address of the dealer nearest you.

A. E. HALPERIN CO., INC.
BOSTON 18, MASS.
YOUR SAFETY — OUR BUSINESS

Circle Item No. 114—Reader Service Card

TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.



Safety Belts

This 14-page brochure offers a brief resume of the Automobile Safety Belt Institute and its seal of approval. Also included are illustrations and reports describing laboratory testing procedure. A report will be found on the results of Cornell University Medical College Crash Injury Research Program. A copy of the California State Safety Belt Regulations and the SAE Recommended Practice For Motor Vehicle Seat Belt Assemblies is also included. Ray Brown Automotive, 5656 Santa Monica Boulevard, Los Angeles 38, Calif.

For more details circle 401
on enclosed return postal card

Fire Protection

This 12-page booklet offers complete information on company's line of fire extinguishers. Included is the ABC Chart of Fire Protection which enables you to determine at once the extinguisher to use on any given type of fire with assurance of prompt, efficient and safe extinguishment. Walter Kidde & Company, Inc., Belleville 9, N. J.

For more details circle 402
on enclosed return postal card

"Radioactive"

Complete monitoring systems for the detection, recording and warning of airborne particulate radioactivity are described in this 6-page bulletin AM-37. To meet any type of need, the systems offer a choice of fixed filter, variable speed or stepwise filter collection. The bulletin also describes monitoring system parts and assemblies available from Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 18, Ind.

For more details circle 403
on enclosed return postal card

"ABC of Fire Protection"

A complete discussion of the nature and advantages of fire protection systems is illustrated in this Bulletin 66. The complete range of fire protection components and systems manufactured by "Automatic" Sprinkler Corporation of America, Youngstown 1, Ohio, are described and pictured. Bulletin includes a two-page, two-color chart of the applications and functions of the different types of systems. Also covers fixed-temperature, rate-of-temperature-rise, and alarm and control systems. Fire extinguishing methods, used in these systems, include water sprinklers, water fog, air foam, chemical foam, dry chemicals, and carbon dioxide.

For more details circle 404
on enclosed return postal card

Hydraulic Hand Pallet Truck

Bulletin 226 describes a one-ton capacity hydraulic hand pallet truck. Among the construction features being introduced in the improved truck are a new reinforced handle, relocation of grease fittings for easier servicing and stronger alloy steel axles. Suggested applications for the truck are illustrated by sketches, and actual on-the-job photos show it in use. The Raymond Corporation, 286-150 Madison Avenue, Greens, N. Y.

For more details circle 405
on enclosed return postal card

Cigarette Dunking Stations

Folder illustrates dunking stations for both wall and stand installations. A new jumbo size Sipco dunking station specifically designed for use in plants where cigarette stations receive more than average use is featured. Standard Industrial Products Co., 920 N. Garfield Ave., Peoria, Ill.

For more details circle 406
on enclosed return postal card

Safety Cans

Five gallons of gasoline explode with as much force as 415 pounds of dynamite, according to information contained in a new Justrite Manufacturing catalog. The catalog features officially approved data on handling flammable and corrosive liquids, insurance requirements and methods of protection for hazardous fluids. According to manufacturer, in recent tests, scientifically fabricated and coated Justrite safety cans, even though completely wrapped in flames, remained ruggedly intact while the fire simply evaporated the flammable contents. Justrite Manufacturing Co., 2061 N. Southport Ave., Chicago, Ill.

For more details circle 407
on enclosed return postal card

"Magna-Weld" Improves Vision for Welders

Claimed to make welding a "pleasure" for welders who wear bifocal glasses is a new optical accessory for welding helmet windows developed by the Seilstrom Manufacturing Co., Palatine, Illinois. Designed for use with personal glasses, fits behind the regular helmet filter lens where it is said to provide magnification for near vision throughout the entire "window" area. Any standard welding helmet can accommodate the "Magna-Weld," according to the manufacturer.

For more details circle 408
on enclosed return postal card

Fluorinated Hydrocarbon Solvents

A 16-page technical booklet describing

properties and applications of fluorinated hydrocarbon solvents in industrial cleaning jobs, ranging from immersion and vapor cleaning of electrical motors and electronic equipment to general laboratory maintenance, is now available from the E. I. duPont de Nemours & Company, Inc., 8531 Nemours Bldg., Wilmington 98, Del. The booklet contains data on comparative performance of the fluorinated compounds, chlorinated solvents like methyl chloroform, carbon tetrachloride, and trichloroethylene, and straight hydrocarbon solvents such as naphtha and gasoline. Separate sections of the technical booklet are devoted to a general discussion of solvent properties, including data on Kauributanol values of most commonly used industrial solvents; safety characteristics of the "Freon" solvents, including non-flammability and low toxicity; their effect on materials such as metals, elastomers, plastic materials, magnet wire coatings, paper insulation, and surface coatings, and stability under a wide range of operating conditions.

For more details circle 409
on enclosed return postal card

Fire-Resistant Hydraulic Fluid

Literature describes an economical new "snuffer" type hydraulic fluid whose fire-resistant qualities prevent it from burning on contact with flames, heated metal surfaces, or molten metal. Called Iru Fluid 902, it is non-corrosive on ferrous and most non-metals, has no harmful effects on seals, fittings or bearings. Shell Oil Co., 30 W. 50th St., New York 22, N. Y.

For more details circle 410
on enclosed return postal card

Noise Control

An eight page illustrated brochure, "Noise Control" has been published by Allied Witan Company, 12500 Bellaire Road, Cleveland, Ohio. The brochure illustrates with charts and photographs the applications of the new pneumatic mufflers for the elimination of exhaust noises of air operated equipment. The charts illustrate the performance data of the mufflers in frequency and attenuation levels in decibels, loudness and attenuation levels in sones, air flow CFM, noise levels and attenuation levels at various airline pressures.

For more details circle 411
on enclosed return postal card

Methane Detector

A new bulletin describes the portable M-S-A Type W-8 Methane Detector, which can quickly and accurately determine the methane content of mine air. According to

the bulletin the instrument is simple-to-operate and is extremely sensitive. It has two scale ranges, one graduated in one-tenth-per cent divisions between two per cent and five per cent. The lower scale has a range of zero to two per cent, graduated in five-hundredth divisions. Readings on this scale may be estimated to one-hundredth per cent. Either scale may be used by flipping a handy toggle switch. Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle 412
on enclosed return postal card

Safety Steel Stamps

Mecco Safety Steel Stamps, holders, fixtures and other marking devices are included in a new four-page bulletin published by M. E. Cunningham Company, 1025 Chateau Street, Pittsburgh, 33, Pa. A feature of the bulletin is a series of charts and related data developed to "take the guesswork out of ordering steel stamps."

For more details circle 413
on enclosed return postal card

Lubricating System

Bulletin No. 70, an eight-page illustrated brochure describes Lubrival, a new type of circulating oil system developed by The Farval Corporation, 3249 E. 80th St., Cleveland 4, Ohio, for application on presses and semi-automatic or automatic machine tools, etc., with built-in return oil arrangements. The new product monitors its own operation through a pressure sensing mechanism to warn of clogged or broken lines in any part of the system.

For more details circle 414
on enclosed return postal card

"Foamite Airfoam Fire Extinguishing Systems"

Here's up-to-the-minute data on various aspects of Foamite Airfoam Equipment for fixed piping installations, semi-portable and portable applications. Includes detailed engineering and specification information and diagrammatic drawings of installations. An excellent aid in the study of fire protection for hazards to which airfoam is best suited. American La France Foamite Corporation, Elmira, N. Y.

For more details circle 415
on enclosed return postal card

Bumpers

A new catalog sheet, illustrating and describing its line of Flex-O Rubber Truck Bumpers, has just been released by Bumpers, Inc., 2534 Detroit Avenue, Cleveland 13, Ohio. The bumpers are specially engineered to prevent damage to truck bodies, reduce dock damage, and protect fragile freight by absorbing impact shock caused by trucks backing into shipping and receiving docks or other obstacles.

For more details circle 416
on enclosed return postal card

Medic Alert Bracelets

Bulletin describes and illustrates this bracelet which was designed to be worn by persons afflicted with dangerous allergies, diabetes, epilepsy and many other conditions. The bracelet carries a message on the back, warning your staff of the potential dangers facing its wearer if his allergy or condition is disregarded. According to the bulletin the bracelet is hailed by doctors, hospitals and law enforcement officials as a realistic means of identification of dangerous physical conditions, especially in emergencies. Medic Alert Company, 1030 Sierra Drive, Turlock, California.

For more details circle 417
on enclosed return postal card

Fire Protection

Colorful 24-pager (C-130) illustrates various types of extinguishers UL-rated for Class A, B, and C fire protection. Explains features of more than 20 hanging and wheeled models, and special CO₂ engineered systems. The Fyr-Flyer Co., 221 Crane Street, Dayton 1, Ohio.

For more details circle 418
on enclosed return postal card

Overhead Doors

Two bulletins—No. 92 has 12 pages on wood-type overhead rolling doors; No. 93 devotes 24 pages to steel types, including fire doors and grills. Construction details, manual and electric drives are covered in both. Kinnear Mfg. Co., 1720 Fields Ave., Columbus 16, Ohio.

For more details circle 419
on enclosed return postal card

Tread Plate

Applications and fabricating data are given in eight-page booklet on abrasive tread plate. Includes table of design data and sketches of suggested safety applications for this non-skid, corrosion-resistant flooring material. Aluminum Company of America, 1671 - F, Alcoa Bldg., Pittsburgh 19, Pa.

For more details circle 420
on enclosed return postal card

Folding Curtains

Low-cost walls that fold up like an accordion, create new enclosures wherever needed, are subject of this four-page folder. Made of jute, plastic-coated, fire-resistant, up to 24-ft. high. Design data included. Bemis Bro. Bag Co., 610 - 4th St., Minneapolis 15, Minn.

For more details circle 421
on enclosed return postal card

Signals

Bulletin No. 100, an eight-pager, tells how to select paging systems, time signals, danger signals, and alarm systems for your plant. Shows typical selection technique for a plant, outlining factors that need to be considered. Federal Sign and Signal Corp., 8725 S. State St., Chicago 19, Ill.

For more details circle 422
on enclosed return postal card

Floor Dressing

This four-page folder lists the advantages (easy application, slip resistance, no buffing) shows application of a heavy-duty non-wax floor dressing. Shows you how to apply. Outlines floor-improvement plan available to users. Masury-Young Co., 76 Roland St., Boston, Mass.

For more details circle 423
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Power Sweeping

This eight-page bulletin answers the question its title poses: "Can We Use Mechanized Sweeping Profitably?" It discusses conditions under which it does pay off, lists the advantages as compared to hand sweeping. G. H. Tennant Co., 2530 N. Second St., Minneapolis 13, Minn.

For more details circle 424
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Skin Cleansers

Four two-page leaflets describe heavy-duty granulated skin cleansers, all-purpose hand cleansing cream, and waterless (pharmaceutical grade) skin cleanser, plus new dispenser for cream, paste, or powdered cleaning agents. G. H. Packwood Mfg. Co., 1545 Tower Grove Ave., St. Louis 10, Mo.

For more details circle 425
on enclosed return postal card

Plant Protection System

Bulletin 4-pages, gives data on portable watchclock system. The bulletin covers

four models, gives performance characteristics, etc. Approved by Underwriters and Factory Mutual Laboratories, Chicago Watchclock, 1526 S. Wabash Ave., Chicago 5, Ill.

For more details circle 426
on enclosed return postal card

Rescue Kit

Folder describes uses and operation of hydraulic rescue kit. It's a hydraulic jack apparatus that can push, pull, lift, press, or spread. Handy in emergencies to save time in freeing victims trapped by disaster in buildings or vehicles. H. K. Porter, Inc., Somerville 43, Mass.

For more details circle 427
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Steel Tubing

Technical data is given in circular 152A on pipe, tubing, and welding fittings made of chrome-moly Alloy steel. Details on creep strength, physical properties, hot and cold bending, welding, heat treatment, and pressure. The Babcock & Wilcox Co., Tubular Productions Div., Beaver Falls, Pa.

For more details circle 428
on enclosed return postal card

Rubber Gloves

Catalog WR-656-75-J, 16-pages, describes and illustrates industrial gloves and finger cots of rubber, latex, Neoprene, Buna-N, and plastic. Tells how to select gloves. Tables show suitability of gloves for variety of materials. The Wilson Rubber Co., 1200 Garfield Ave., B. W., Canton 6, Ohio.

For more details circle 429
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Grating and Treads

Bulletin 2527 is a 26-pp, illustrated bulletin on grating and treads for a variety of applications. Presents descriptions of electro forged, riveted, rectangular, diagonal, U-type and T-interlocked grating and treads. Tables of safe loads and information on specifying are also included. Blaw-Knox Co., Grating Div., 2092 Farmers Bank Bldg., Pittsburgh 22, Pa.

For more details circle 430
on enclosed return postal card

Electric Hoists

Twelve-pp Bulletin DH 133 B describes Speedway electric hoists of 500- to 4000-lb. capacities. Fully illustrates and explains design features and gives details on suspensions and conducting systems. Clearance data, specifications included. Wright Hoist Div., American Chain & Cable Co., Bridgeport, Conn.

For more details circle 431
on enclosed return postal card

Contour Projectors

The use of projections or optical gaging with company's contour projectors is discussed in this illustrated bulletin. Points out chief advantages and describes typical applications. Specifications and dimensional diagrams for a number of models are included. Eastman Kodak Co., 343 State St., Rochester, N. Y.

For more details circle 432
on enclosed return postal card

Miniature Oxygen Regulator

Technical Bulletin No. 226-1 describes a new miniature oxygen regulator developed by the Aeronautical Division of Robertshaw-Fulton Controls Company, 401 N. Manchester Ave., Anaheim, California. The regulator is used in the supplying of oxygen to aircrews and other personnel where oxygen breathing equipment is utilized. The bulletin gives complete information on construction, operation, applications and specifications. Detailed dimension drawings are also included.

For more details circle 433
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FOR SAFETY SAKE

specify

*Safe-Hi*CAR DROPPERS AND
RUNNERS BELT

All nylon, with quick release buckle. Offers outstanding protection for workmen during car-switching operations. Designed to outlast present belts by several years.

Your safety equipment dealer will give you full information... or write to:

ROSE MANUFACTURING CO.

Safe-Hi
DENVER

2700 W. Barberrry Place



New C&E No. 725-RG heavy duty, water-tight extension light has new type grounding plug and grounded portable lamp guard to prevent shock and promote safety.

For Dependability and Safety—C & E

Since 1918, C & E safety electrical equipment has served many industries well. All C & E portable lamp guard handles, attachment plugs, sockets and connector bodies are made of high grade, oil-resistant Neoprene compound. We specialize in heavy duty rubber cord sets and extension lights.



Our Engineering Department will be glad to design special items. Ask on your letterhead for Catalog 53-N.

electrical safety products

ERICSON MANUFACTURING CO.

5209 EUCLID AVE., CLEVELAND 3, OHIO

Circle Item No. 116—Reader Service Card

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A comprehensive Classified Safety Product Index and a Directory of Safety Equipment Sources appear in the March, 1957 Issue.

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... the Reader Service Postcard will get it for you **FAST!**

Here's how it works—

Printed below are two identical Reader Service postcards—the bottom one for your use; the top one for later readers of this issue. The numbers listed on each card are keyed to product advertised and the new

safety equipment and trade publications described on pages 151 through 161. Just circle the items you want to know more about, and we will ask the manufacturer to send you full information without obligation. Both cards are perforated for easy removal, and no postage is required.

Products Advertised

As you read through this issue of the NEWS, you will find advertisements describing equipment that may help you solve some of your accident problems. Instead of making a "mental note," make sure you get full information by circling the item number on the Reader Service postcard that corresponds to the number appearing with the ad. If no item number appears with an ad, you will find it on the opposite page.

Cover position ads are shown on the postcard as follows: IFC—inside front cover; IBC—inside back cover; BC—back cover.

New Safety Equipment

Products featured in this section have been carefully reviewed by Council engineers so as to bring you only what's new and reliable in the safety field. Only new safety and health products, or newsworthy improvements in existing equipment are eligible for listing.

Trade Publications

Here's a wealth of helpful trade literature—catalogs, spec sheets, booklets, brochures—that will help you compare before you buy. Whether you are in the market now, or think you may be at a later date, you'll want these valuable references in your safety equipment data file.

IMPORTANT—Be sure to fill in your name, organization and address in the space provided on this side of the postcard.

National Safety News, July, 1957

Please send me more information on the items circled below:

JULY, 1957

(Good until October 31, 1957)

PRODUCTS ADVERTISED:

IFC	IBC	BC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
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Please print your name and company in full—do not abbreviate

NAME..... POSITION

COMPANY

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CITY & STATE

Please send me more information on the items circled below:

JULY, 1957

(Good until October 31, 1957)

PRODUCTS ADVERTISED:

IFC	IBC	BC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
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Please print your name and company in full—do not abbreviate

NAME..... POSITION

COMPANY

ADDRESS

CITY & STATE

The advertising pages of the News

... your guide to reliable suppliers of worthwhile safety equipment

The advertising policy of the NEWS requires that all equipment and products meet established codes and standards, have the approval of recognized testing agencies, or have proven their value through actual use in industry. Council engineers and technicians screen every

advertisement to make sure that product description is accurate, and performance claims verified by reliable sources. It should not be construed, however, that products advertised are approved or endorsed by the National Safety Council.

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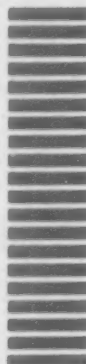
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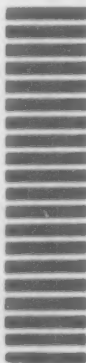
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National Safety News, July, 1957

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